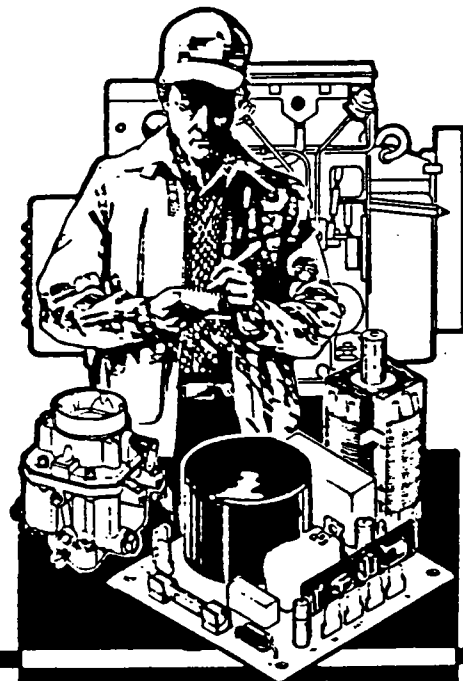


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Onan

Parts Manual

DFY GenSet



Onan Service Parts

960-0229
12-86 (Spec B-E)
Replaces 10-81 (Spec B-D)
Printed in U.S.A.

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Introduction

This Parts Manual applies to the Standard Sets Listed below. The illustrations are arranged in groups of related items, and each part or assembly is identified by a Reference Number. All parts illustrated are typical, and unless otherwise mentioned in the description column the parts are interchangeable between models.

These typical illustrations are subject to change and reflect only the latest replacement parts arrangement. The Right and Left sides of the Set are determined by FACING the FRONT of the Set (Engine End)

Set Data Table

MODEL IDENTIFICATION	RATING	RPM RATING	BATTERY VOLTAGE
385.0 DFY - */ # @	385,000 WATTS	1500 RPM	24 VDC
450.0 DFY - */ # @	450,000 WATTS	1800 RPM	24 VDC
450.0 DFY - */ # @	450,000 WATTS	1500 RPM	24 VDC
500.0 DFY - */ # @	500,000 WATTS	1800 RPM	24 VDC
550.0 DFY - */ # @	550,000 WATTS	1500 RPM	24 VDC
600.0 DFY - */ # @	600,000 WATTS	1800 RPM	24 VDC

Electrical Data Table

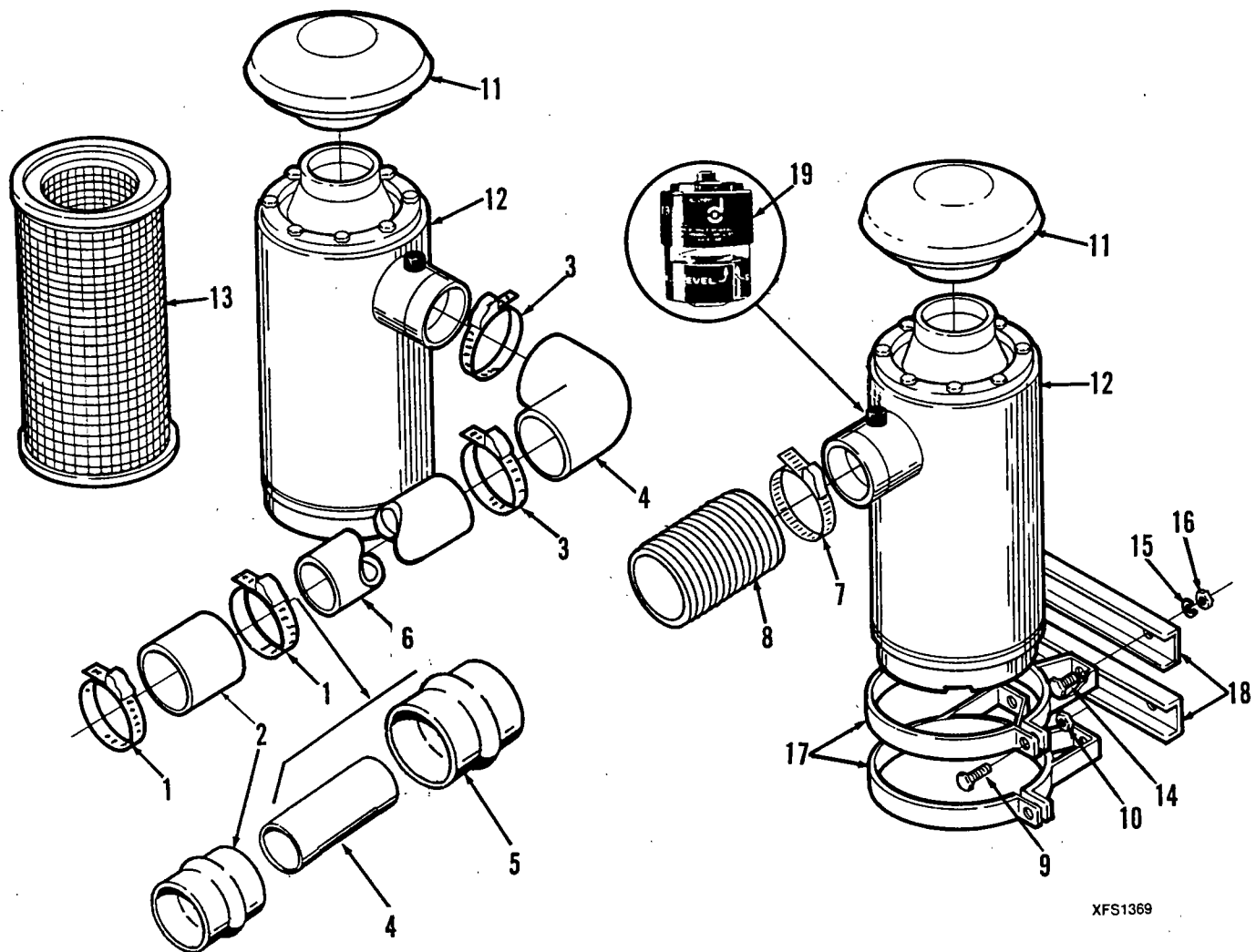
*VOLTAGE CODE	VOLTS	HERTZ	WIRE	PHASE	NOTES
4	120/208	60	4	3	
4X	277/480	60	4	3	
5D	120/240	60	4	3	
6D	240/480	60	4	3	
7	220/380	60	4	3	
7X	240/416	60	4	3	
8	127/220	60	4	3	
9X	347/600	60	4	3	
\$	139/240	60	4	3	\$
31	+	60	12	3	+
519	110/190,	50	4	3	
	115/200				
521	120/208,	50	4	3	
	127/220				
520	220/380,	50	4	3	
	230/400				
522	240/416,	50	4	3	
	254/440				
523	200/346	50	4	3	

- * - Voltage Codes follow Model Letter designations.
- # - Specification Number: Number 1 is Standard, all others indicate variations.
- @ - Specification Letter: Letter advances (A to B, B to C, etc) with major manufacturing changes.
- \$ - No Standard Voltage Code, number 99 is marked on the nameplate for reference information.
- + - The Stators are Reconnectable.

Engine Replacement Parts

All Engine replacement parts must be ordered from the Engine Manufacturer, except those modified or added by Onan. When ordering engine parts, refer to the Engine Manufacturer's Nameplate and supply the Model, Specification, Serial Numbers and other available information. Refer to the Engine Manufacturer's Manuals for your nearest authorized Parts Distributor; or contact the Onan Distributor from whom you purchased this set, for assistance in ordering the replacement parts.

Air Cleaner

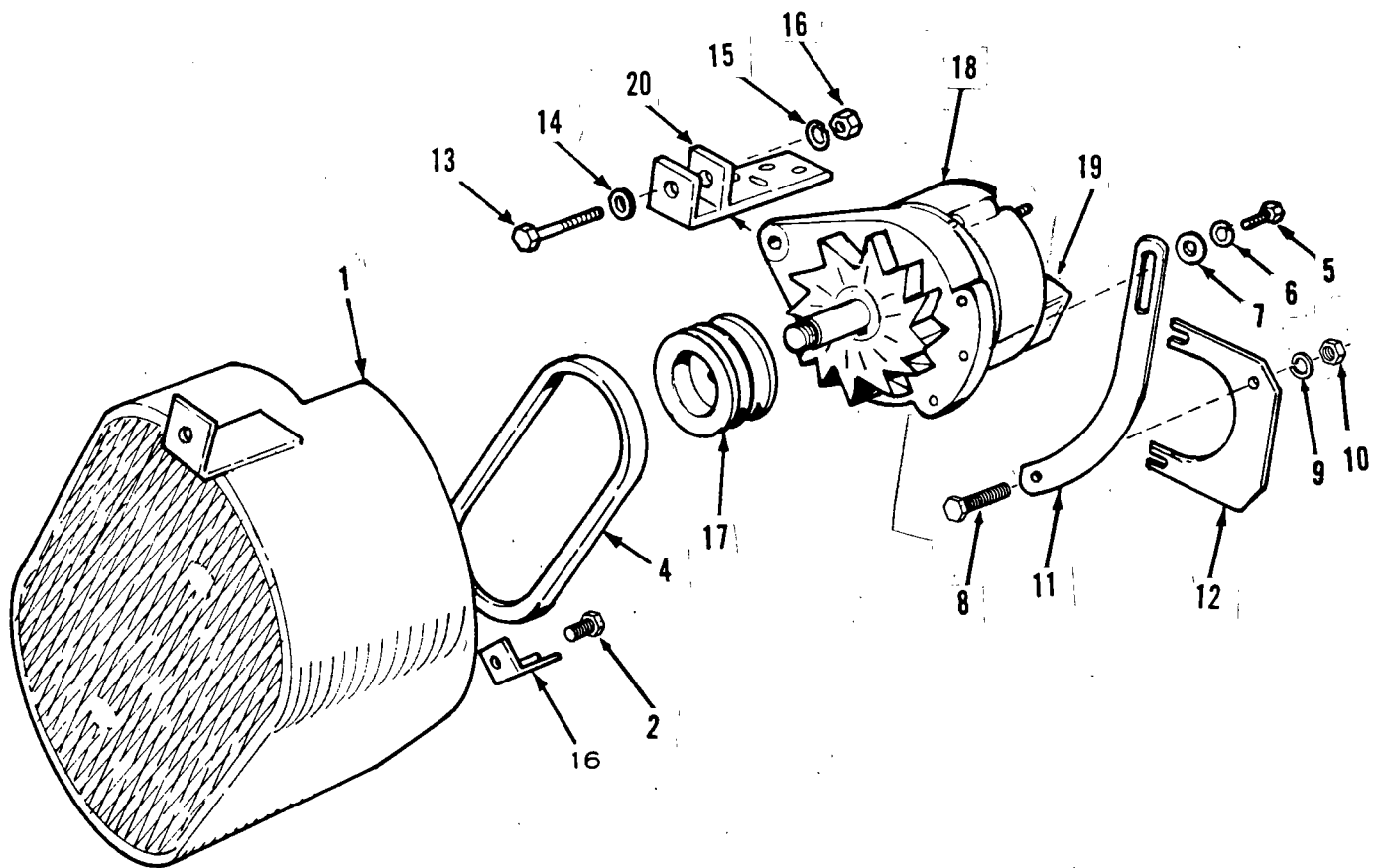


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REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0612	2	*Clamp, Hose	8	503-0641	2	Hose, Bulk - Order by Foot
	503-0900	4	550 kW Set Only				(2 Feet Required) (Thru 1981)
	503-0863	4	550 kW Set only	9	800-0032	4	Screw, Cap - Hex Head
2			All other sets				(5/16-18 x 1-3/4")
	140-1898	2	*Hose	10	870-0257	4	Nut, Self-locking - Hex
	503-0806	2	Reducer (550 kW Set only)				(5/16-18)
			Straight (all other sets)	11	140-1347	2	Cap, Air Cleaner
3			*Clamp, Hose	12	140-1346	2	Cleaner, Air (Includes
	503-0784	6	550 kW Set only				Element)
	503-0863	4	All other sets	13	140-1376	2	Element
4	140-1897	2	*Tube (550 kW Set Only)	14	800-0071	10	Screw, Cap - Hex Head
5	140-1899	2	*Hose, Reducer (550 kW Set only)				(7/16-14 x 1")
6			*Tube, Air	15	850-0055	10	Washer, Lock - Spring (7/16")
	140-1397	2	13" Lg	16	862-0004	10	Nut, Hex (7/16-14)
	140-1828	2	18" Lg	17	140-1345	4	Band, Mounting
	140-1816	2	20" Lg	18	140-1527	2	Support, Air Cleaner
	140-1817	2	22" Lg	19	140-1548	2	Indicator, Service
7	503-0748	4	Clamp, Hose (Thru 1981)				

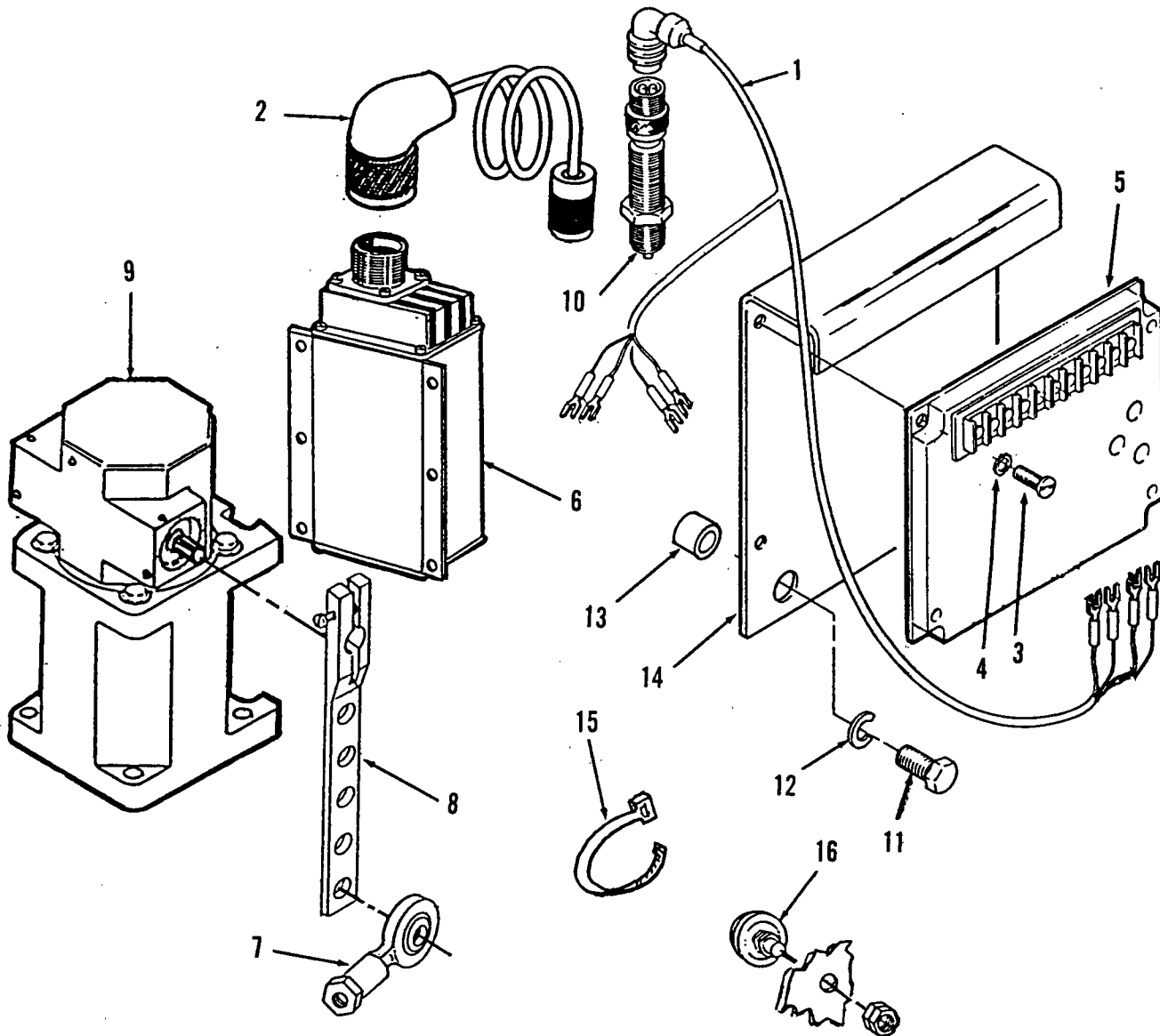
* - Used Begin 1982; may be used on sets built prior to 1982 in lieu of items 7 and 8.

Alternator



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1212	1	Guard, Belt	10	862-0003	1	Nut, Hex (3/8-16)
2	821-0010	1	Screw, Self-locking - Hex (1/4-20 x 1/2")	11	191-1217	1	Arm, Adjusting
3	130-1210	1	Bracket, Mounting	12	191-1228	1	Bracket, Mounting
4	511-0037	1	Belt, Drive	13	800-0095	1	Screw, Cap - Hex Head (1/2-13 x 2-1/4")
5	800-0026	1	Screw, Cap - Hex Head (5/16-18 x 3/4")	14	526-0028	1	Washer, Flat (1/2")
6	850-0045	1	Washer, Lock - Spring (5/16")	15	850-0060	1	Washer, Lock - Spring (1/2")
7	526-0022	1	Washer, Flat (5/16")	16	862-0016	1	Nut, Hex (1/2-13)
8	800-0048	1	Screw, Cap - Hex Head (3/8-16 x 3/4")	17	191-1120	1	Pulley
9	850-0050	1	Washer, Lock - Spring (3/8")	18	191-0688	1	Alternator (Includes Regulator)
				19	191-0733	1	Regulator, Voltage
				20	191-0697	1	Bracket, Mounting

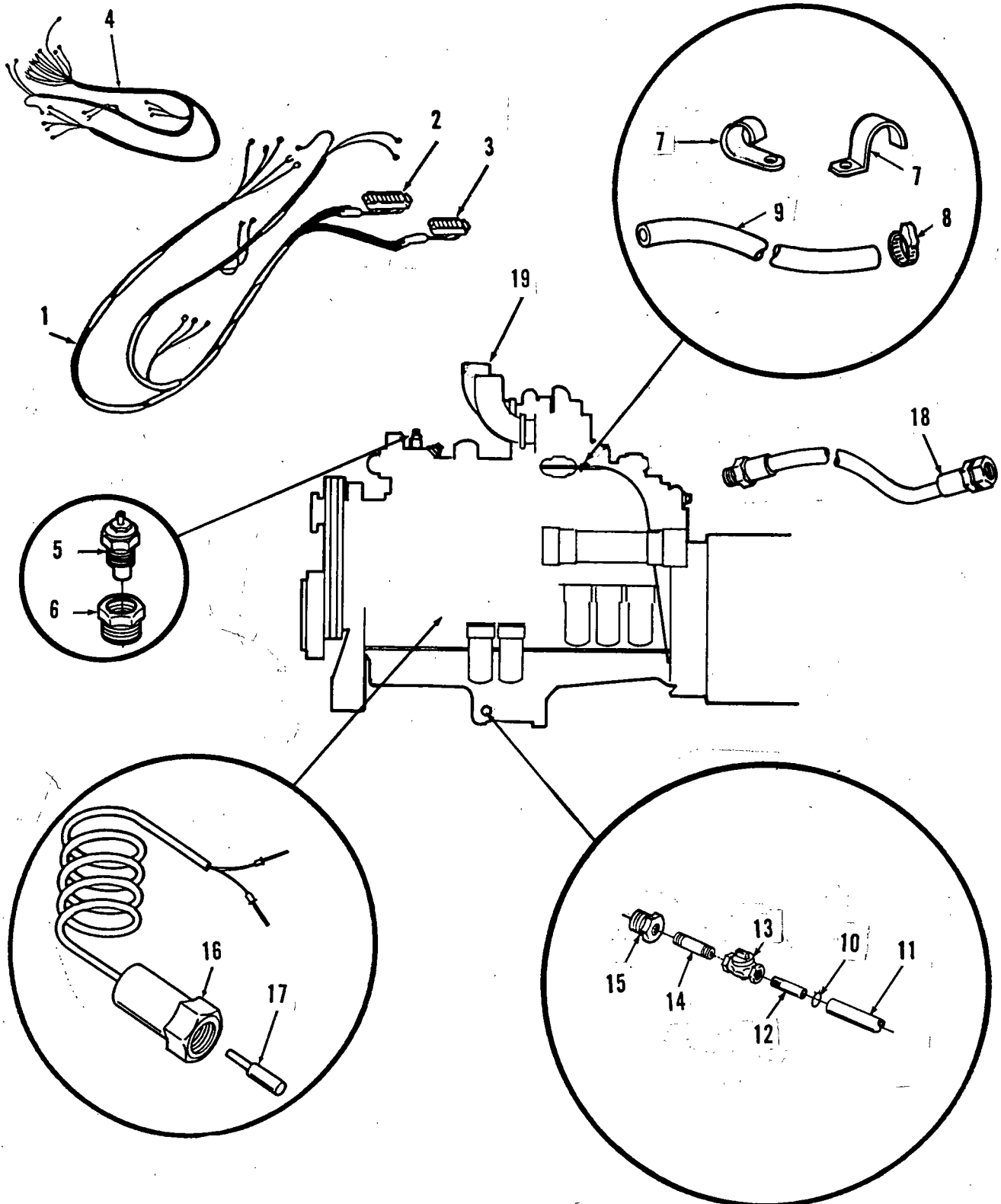
Electric Governor



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	338-1777	1	Harness, Wiring - Begin Spec E
2	338-1086	1	Harness, Wiring - Spec A Thru D
3	813-0103	4	Screw, Machine - Round Head (#10-32 x 3/4")
4	870-0131	4	Nut, Self-locking, Hex (#10-32)
5	151-0637	1	Controller, Governor - Begin Spec E
6	151-0399	1	Controller, Governor - Spec A Thru D
7	151-0443	2	Joint, Ball - Spec A Thru D

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
8	151-0441	1	Lever - Spec A Thru D
9	151-0419	1	Actuator - Spec A Thru D
10	151-0411	1	Pickup, Magnetic
11	800-0151	2	Screw, Cap - Hex Head (3/4-10 x 1")
12	850-0079	2	Washer, Lock - Spring (3/4")
13	370-4040	2	Spacer, Sleeve
14	150-2007	1	Bracket, Mounting - Begin Spec E
15	332-1445	9	Tie, Cable
16	151-0402	1	Potentiometer - Speed Control - Spec A Thru D (Mounted in Set Control)

Miscellaneous Engine Parts Right Side

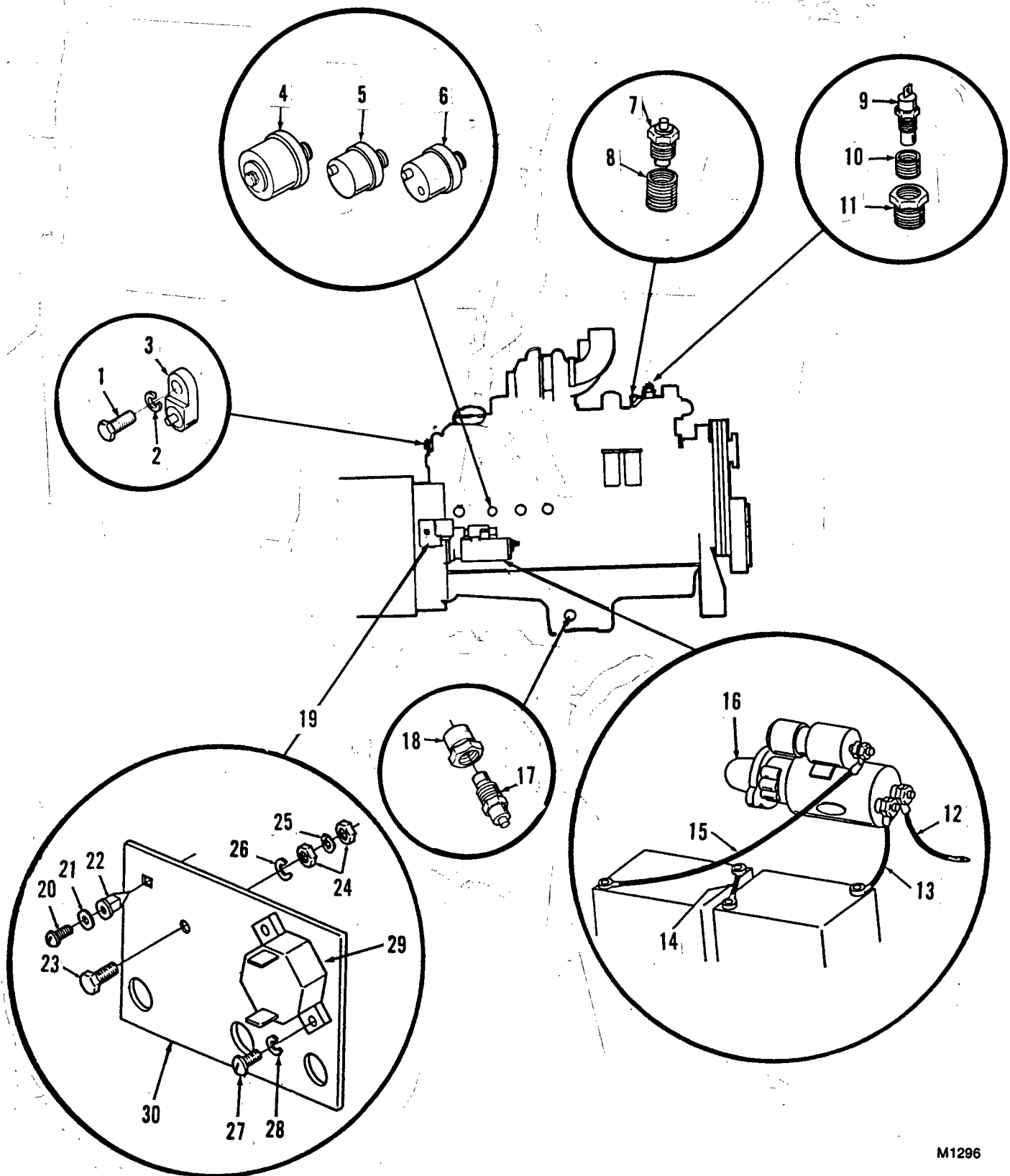


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Miscellaneous Engine Parts Right Side

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	338-2068	1	Harness, Wiring - Begin Spec E (Includes Connectors)	11	503-0789	1	Hose
2	323-1304	1	Housing, Connector - 6 Place	12	505-0185	1	Nipple, Pipe - Half
	323-1200	6	Contact, Pin	13	504-0011	1	Valve, Shutoff
3	323-1306	1	Housing, Connector - 8 Place	14	505-0100	1	Nipple, Pipe
	323-1200	8	Contact, Pin	15	505-0022	1	Bushing, Reducer - Hex
4	338-1103	1	Harness, Wiring - Spec B Thru D	16	302-0750	1	Sender - Tachometer
5	193-0247	1	Sender, Temperature - Engine Coolant (E2)	17	302-0753	1	Tang, Drive - Tachometer
6	505-0117	2	Bushing, Reducer - Flush	18	501-0332	1	Line, Fuel - Incoming
7			Clamp, Holddown		501-0285	1	30" Lg
	148-0274	4	Loop, 1" ID		501-0217	1	36" Lg
	331-0151	3	Half Loop, 3/4" ID				52" Lg
	331-0152	3	Half Loop, 1" ID		501-0219	1	Return
8	503-0183	2	Clamp, Hose		501-0248	1	30" Lg
9	503-0859	2	Hose		501-0216	1	36" Lg
10	503-0197	1	Clamp, Hose		501-0211	1	42" Lg
				19	155-1393	2	65" Lg
							Elbow, Exhaust

Miscellaneous Engine Parts Left Side



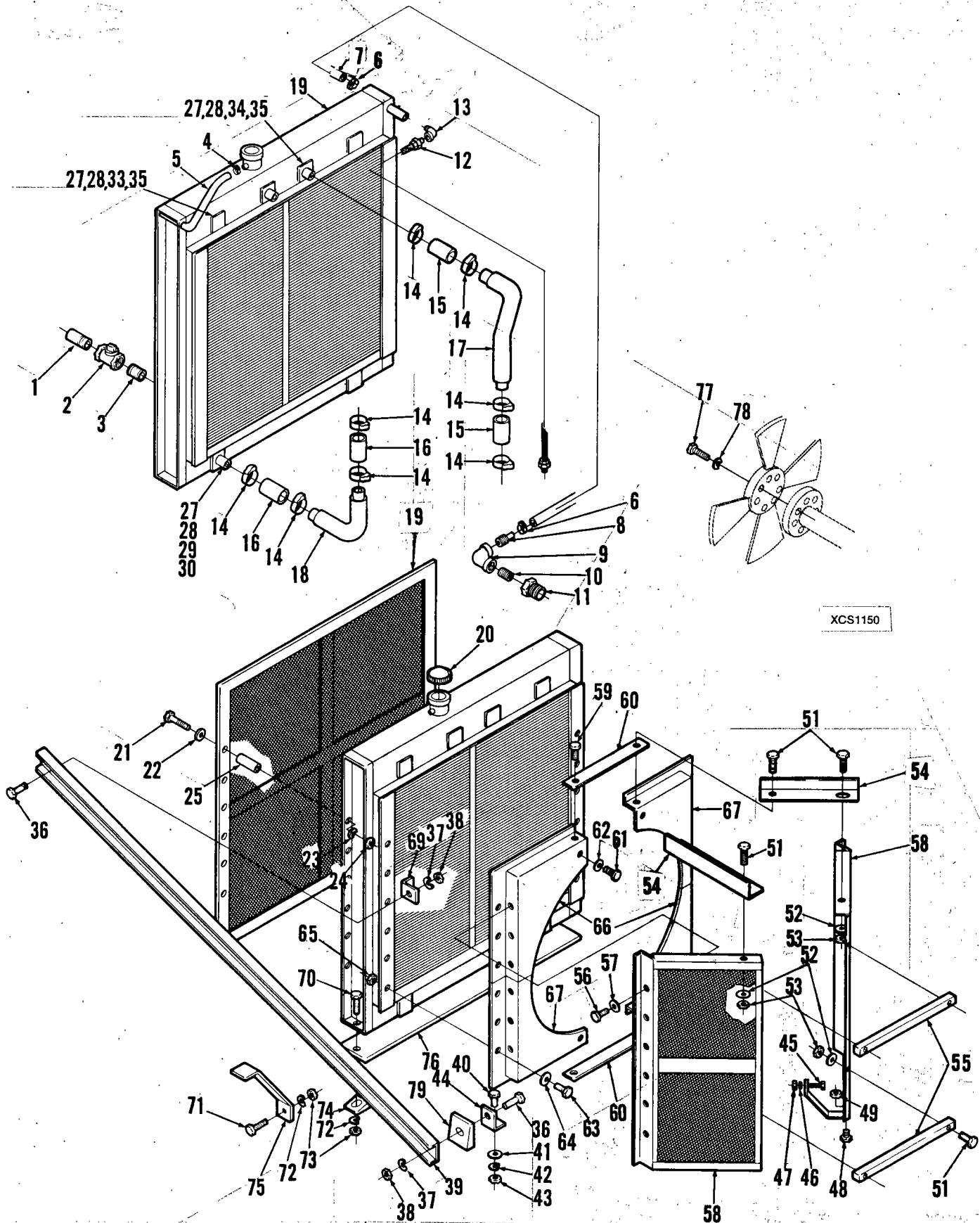
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Miscellaneous Engine Parts Left Side

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0028	1	Screw, Cap - Hex Head (5/16-18 x 1")	14	416-0446	1	Cable, Battery - Junpier
2	850-0045	1	Washer, Lock - Spring (5/16")	15	416-0444	1	Cable, Battery - Positive
3	309-0269	1	Switch, Thermostatic - Low Engine Temperature (S4)	16	191-1588	1	Starter
4	193-0244	1	Sender, Pressure - Oil (E1)	17	309-0398	1	Sender, Temperature - Oil
5	309-0272	1	Switch, Pressure - Oil - Alarm (S5)	18	505-0022	1	Bushing, Reducer - Hex
6	309-0169	1	Switch, Pressure - Oil - Shutdown (S1)	19	332-1383	1	Terminal Assembly (Includes Parts Marked*)
7	309-0178	2	Switch, Thermostatic - Coolant Temperature - Alarm (S2)		800-0130	1	Screw, Cap - Hex Head (5/16-18 x 1")
8	505-0117	2	Bushing, Reducer - Flush		856-0016	1	Washer, Lock - EIT (5/16")
9	309-0179	1	Switch, Thermostatic - Coolant Temperature - Shutdown (S6)	20	809-0035	1	*Screw, Tapping - Round Head (#8 x 3/4")
10	505-0117	1	Bushing, Reducer - Flush	21	508-0015	1	*Washer, Insulating
11	505-0021	1	Bushing, Reducer - Hex	22	870-0196	1	*Nut, Insulated
12	416-0632	1	Cable, Ground	23	800-0005	1	*Screw, Cap - Hex Head (1/4-20 x 3/4")
	800-0093	1	Screw, Cap - Hex Head (1/2-3 x 1-3/4")	24	862-0001	2	*Nut, Hex (1/4-20)
	856-0013	1	Washer, Lock - EIT (1/2")	25	856-0006	1	*Washer, Lock - EIT (1/4")
	850-0050	1	Washer, Lock - Spring (1/2")	26	850-0040	1	*Washer, Lock - Spring (1/4")
	862-0016	1	Nut, Hex (1/2-13)	27	813-0103	2	*Screw, Machine - Round Head (#10-32 x 3/4")
13	416-0444	1	Cable, Battery - Negative	28	850-0030	2	*Washer, Lock - Spring (#10)
				29	320-0240	1	*Breaker, Circuit
				30	332-1382	1	*Board, Terminal

*- Parts included in Circuit Breaker Assembly.

Cooling System - Radiator

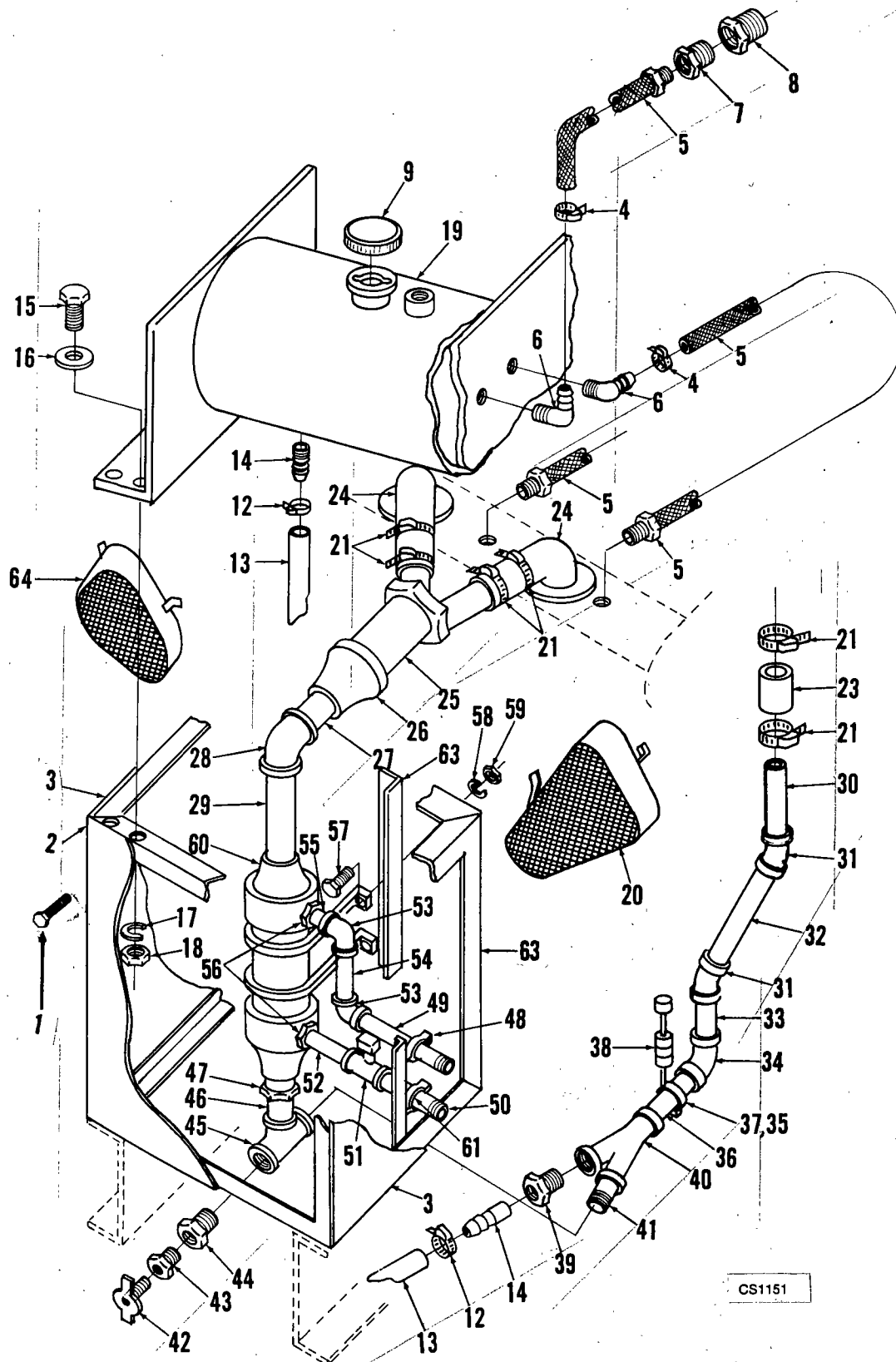


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Cooling System - Radiator

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	505-0185	1	Nipple, Pipe - Half	48	821-0016	2	Screw, Self-locking - Hex (5/16-18 x 3/4")
2	504-0011	1	Valve, Shutoff	49	870-0257	2	Nut, Self-locking - Hex (5/16-18)
3	505-0100	1	Nipple, Pipe - Close	50			Brace
4	503-0547	1	Clamp, Hose		130-1218	2	Spec B Only
5	503-0803	1	Hose		130-1331	2	Begin Spec C
6	503-0398	2	Clamp, Hose	51	821-0018	8	Screw, Self-locking - Hex (1/4-20 x 5/8")
7	503-0860	1	Hose	52	526-0018	8	Washer, Flat (1/4")
8	505-0759	1	Adapter, Hose	53	870-0212	8	Nut, Self-locking - Hex (1/4-20)
9	505-0041	1	Elbow, Pipe - 90 Degree	54			Brace
10	505-0004	1	Nipple, Pipe - Close		130-1205	2	Spec B Only
11	505-0023	1	Bushing, Reducer - Hex		130-1333	2	Begin Spec C
12	501-0247	2	Line, Fuel	55			Brace
13	502-0041	1	Elbow, Pipe - Inverted Male, 90 Degree		130-1226	2	Spec B Only
14	503-0612	12	Clamp, Hose		130-1332	4	Begin Spec C
15	503-0788	4	Hose	56	821-0018	12	Screw, Self-locking - Hex (1/4-20 x 5/8")
16	503-0856	2	Hose	57	526-0018	12	Washer, Flat (1/4")
17	130-1206	2	Tube - Upper	58			Guard, Fan
18	130-1202	1	Tube - Lower		130-1213	2	Spec B Only
19	130-1197	1	Radiator (Includes Cap and Front Guard)		130-1328	2	Begin Spec C
20	130-2981	1	Cap, Radiator	59	821-0018	6	Screw, Self-locking - Hex (1/4-20 x 5/8")
21	800-0032	8	Screw, Cap - Hex Head (5/16-18 x 1-3/4")	60	130-1225	2	Bracket
22	526-0115	8	Washer, Flat (5/16")	61	821-0018	8	Screw, Self-locking - Hex (1/4-20 x 5/8")
23	850-0045	8	Washer, Lock - Spring (5/16")	62	526-0018	8	Washer, Flat (1/4")
24	862-0015	8	Nut, Hex (5/16-18)	63	821-0016	12	Screw, Self-locking - Hex (5/16-18 x 3/4")
25	402-0017	8	Spacer, Sleeve	64	526-0155	12	Washer, Flat (5/16")
27	800-0050	24	Screw, Cap - Hex Head (3/8-16 x 1")	65	870-0257	12	Nut, Self-locking - Hex (5/16-18)
28	850-0050	24	Washer, Lock - Spring (3/8")	66	130-1214	2	Shroud, Fan
29	130-1222	1	Adapter, Tube - Outlet	67	130-1215	2	Shroud, Fan
30	130-1229	1	Gasket	68	148-0274	2	Clamp, Loop
32	130-1193	1	Gasket	69	130-1228	2	Bracket
33	130-1223	2	Cover - Inlet	70	800-0159	4	Screw, Cap - Hex Head (3/4-10 x 3")
34	130-1203	2	Adapter, Tube - Inlet	71	800-0156	2	Screw, Cap - Hex Head (3/4-10 x 2-1/4")
35	130-1227	4	Gasket	72	850-0079	6	Washer, Lock - Spring (3/4")
36	800-0091	4	Screw, Cap - Hex Head (1/2-13 x 1-1/4")	73	862-0020	6	Nut, Hex (3/4-10)
37	850-0060	4	Washer, Lock - Spring (1/2")	74	403-1141	2	Washer, Bevel
38	862-0005	4	Nut, Hex (1/2-13)	75	130-1199	2	Support, Radiator
39	130-1045	2	Brace, Radiator	76	130-1198	1	Plate, Support - Radiator
40	800-0091	2	Screw, Cap - Hex Head (1/2-13 x 1-1/4")	77			Screw, Cap - Hex Head
41	526-0028	2	Washer, Flat (1/2")		800-0094	8	1/2-13 x 2 (Used Thru 1985)
42	850-0060	2	Washer, Lock - Spring (1/2")		800-0108	8	1/2-13 x 6-1/2" (Begin 1986)
43	862-0005	2	Nut, Hex (1/2-13)	78	850-0060	8	Washer, Lock - Spring (1/2")
44	130-0944	2	Bracket, Angle	79	526-0278	4	Washer, Bevel (Spec B Only)
45	800-0028	2	Screw, Cap - Hex Head (5/16-18 x 1")				
46	850-0045	2	Washer, Lock - Spring (5/16")				
47	862-0015	2	Nut, Hex (5/16-18)				

Cooling System - Heat Exchanger

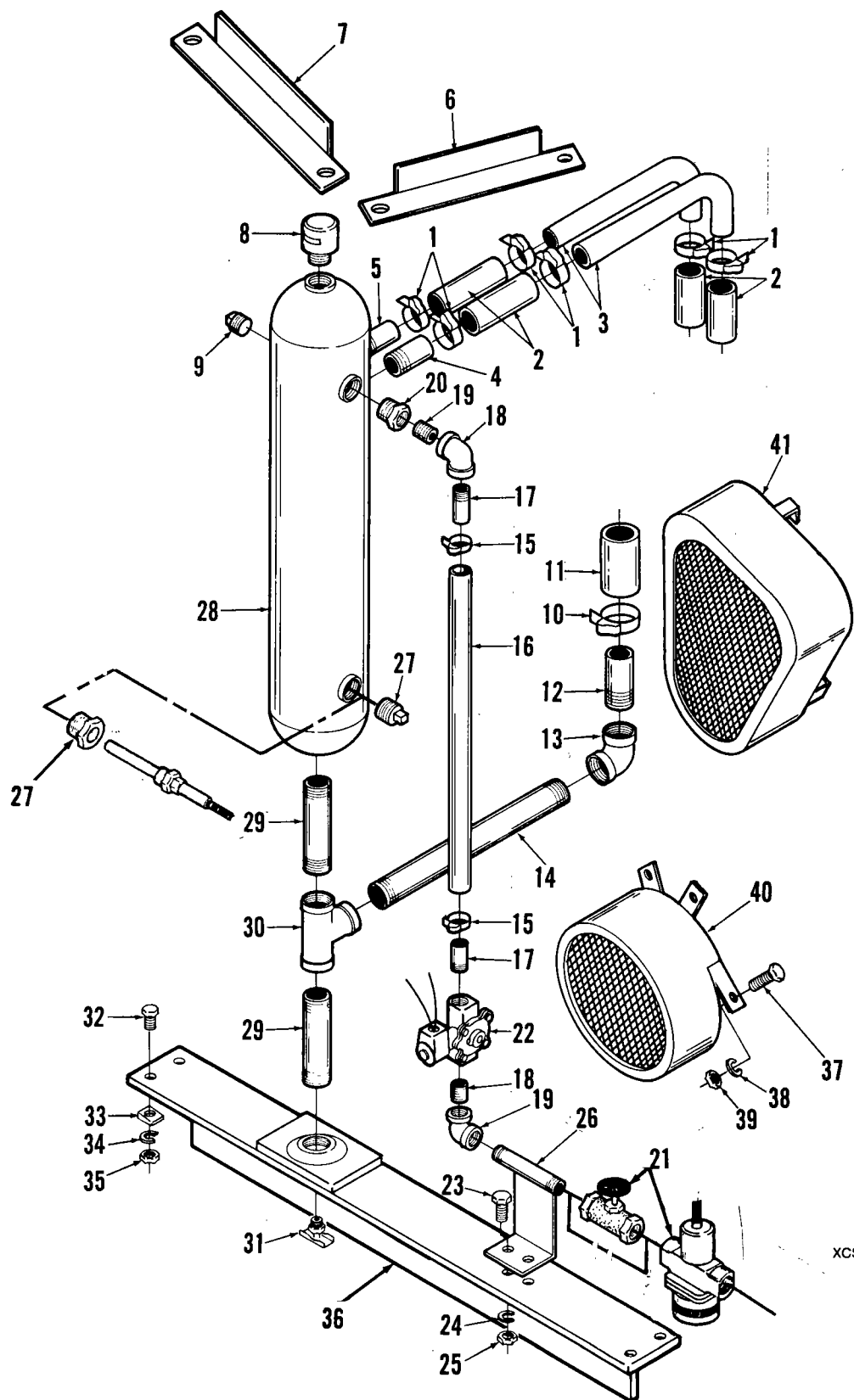


CS1151

Cooling System - Heat Exchanger

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	815-0351	54	Screw, Tapping - Hex Head (1/4-20 x 3/8")	38			Spacer
2	130-1507	1	Panel, Front		526-0030	4	1/8" Thk
3			Panel, Side		232-2693	4	1/2" Thk
	130-1506	1	Left Side	39	505-0955	1	Bushing, Reducer - Hex
	130-1508	1	Right Side	40	505-0956	1	Wye, Pipe
4	503-0685	4	Clamp, Hose	41	505-0328	1	Nipple, Pipe
5	501-0220	4	Line, Fuel	42	504-0080	1	Cock, Drain
6	502-0313	4	Elbow, Pipe to Hose	43	505-0131	1	Bushing, Reducer - Hex
7	505-0151	2	Busing, Reducer - Hex	44	505-0812	1	Bushing, Reducer - Hex
8	505-0022	2	Bushing, Reducer - Hex	45	505-0669	1	Tee, Pipe
9	130-0449	1	Cap, Radiator	46	505-0382	1	Nipple, Pipe
10	501-0089	1	Line, Fuel	47	505-0412	1	Bushing, Reducer - Hex
11	502-0041	1	Elbow, Pipe - 90 Degree	48			Hardware
12	503-0398	2	Clamp, Hose		800-0028	2	Screw, Cap - Hex Head (5/16-18 x 1")
13	503-0860	1	Hose		850-0045	2	Washer, Lock - Spring (5/16")
14	505-0759	2	Adapter, Hose		862-1015	2	Nut, Hex (5/16-18)
15	800-0051	6	Screw, Cap - Hex Head (3/8-16 x 1-1/4")	49	505-0403	1	Nipple, Pipe
16	526-0013	6	Washer, Flat (3/8")	50	505-0379	1	Nipple, Pipe
17	850-0050	6	Washer, Lock - Spring (3/8")	51	307-0844	1	Valve, Solenoid
18	862-0003	6	Nut, Hex (3/8-16)	52	505-0173	1	Nipple, Pipe
19	130-1515	1	Tank, Expansion	53	505-0175	2	Elbow, Pipe - 90 Degree
20	130-1373	1	Guard, Belt	54	505-0432	1	Nipple, Pipe
21	503-0612	6	Clamp, Hose	55	505-0172	1	Nipple, Pipe
22	503-0788	2	Hose	56	505-0738	2	Bushing, Reducer - Hex
23	503-0856	1	Hose	57	800-0092	4	Screw, Cap - Hex Head (1/2-13 x 1-1/2")
24	130-1908	2	Housing, Outlet	58	850-0060	4	Washer, Lock - Spring (1/2")
25	130-1441	1	Manifold, Coolant	59	862-0005	4	Nut, Hex (1/2-13)
26	505-0448	1	Coupling, Reducer	60	130-1432	1	Exchanger, heat
27	505-0164	1	Nipple, Pipe	61	331-0197	2	Hanger, Pipe
28	505-0171	1	Elbow, Pipe - 90 Degree		800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")
29	505-0962	1	Nipple, Pipe		850-0040	2	Washer, Lock - Spring (1/4")
30	505-0957	1	Nipple, Pipe - Half		862-0001	2	Nut, Hex (1/4-20)
31	505-0605	2	Elbow, Pipe - 45 Degree	62	130-1692	1	Bracket, Support
32	505-0958	1	Nipple, Pipe		800-0028	2	Screw, Cap - Hex Head (5/16-18 x 1")
33	505-0660	1	Nipple, Pipe		850-0045	2	Washer, Lock - Spring (5/16")
34	505-0453	1	Elbow, Pipe - 90 Degree		862-1015	2	Nut, Hex (5/16-18)
35			Hardware	63	130-1509	1	Frame, Mounting - Heat Exchanger
	800-0028	1	Screw, Cap - Hex Head (5/16-18 x 1")		800-0094	5	Screw, Cap - Hex Head (1/2-13 x 2")
	850-0045	1	Washer, Lock - Spring (5/16")		850-0060	5	Washer, Lock - Spring (1/2")
	862-1015	1	Nut, Hex (5/16-18)		526-0278	5	Washer, Bevel
36	505-0603	1	Nipple, Pipe		862-0005	5	Nut, Hex (1/2-13)
37	331-0198	1	Hanger, Pipe	64	130-1212	1	Guard, Belt
	800-0043	1	Screw, Cap - Hex Head (5/16-18 x 5")				
	850-0045	1	Washer, Lock - Spring (5/16")				
	862-1015	1	Nut, Hex (5/16-18)				

Cooling System - Standpipe

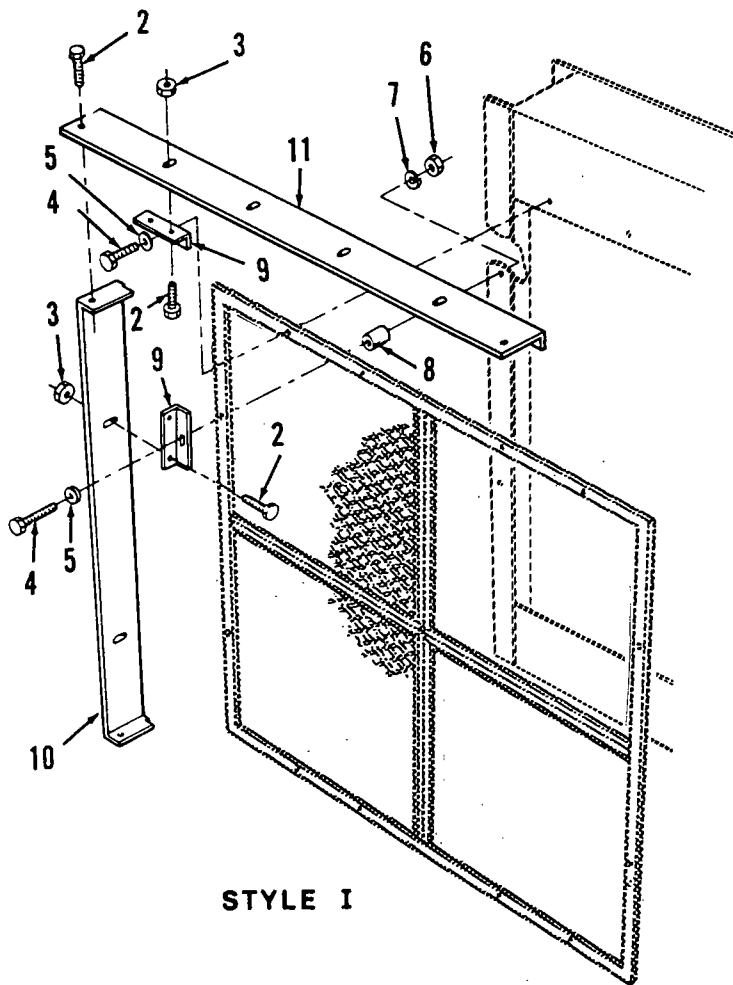


XCS1152

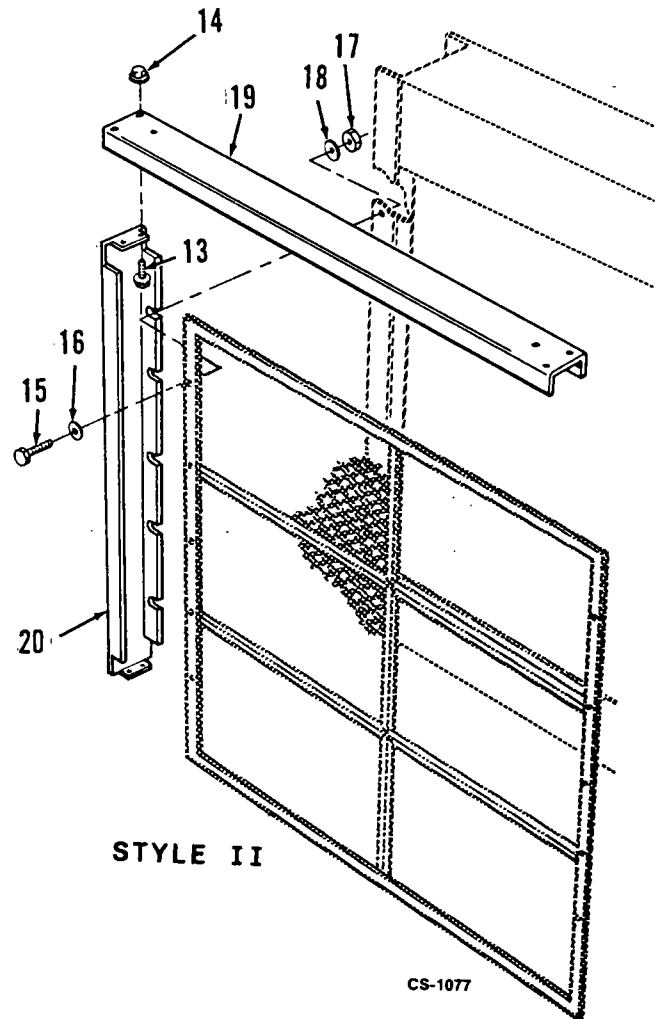
Cooling System - Standpipe

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0648	8	Clamp, Hose	21			Valve
2	503-0788	4	Hose		504-0051	1	Globe (Non-Regulated System)
3	130-1687	2	Tube, Preformed		309-0243	1	Control (Regulated System)
4	505-1046	1	Nipple, Pipe - Half	22	307-0839	1	Valve, Solenoid
5	505-0178	1	Nipple, Pipe - Half	23	800-0006	2	Screw, Cap - Hex Head
6			Brace				(1/4-20 x 7/8")
	130-1688	1	Right Side	24	850-0040	2	Washer, Lock - Spring (1/4")
	130-1689	1	Left Side	25	862-0001	2	Nut, Hex (1/4-20)
	800-0028	2	Screw, Cap - Hex Head	26	110-1168	1	Bracket and Nipple Assembly
			(5/16-18 x 1")	27			Bushing - Plug
	850-0045	2	Washer, Lock - Spring (5/16")		505-0949	1	Plug, Pipe - Socket Head
	862-1015	2	Nut, Hex (5/16-18)				(Non-Regulated System)
8	504-0062	1	Valve, Vacuum Relief		505-0297	1	Bushing, Reducer - Hex
9	505-0334	1	Plug, Pipe - Square Head				(Regulated System)
10	503-0612	2	Clamp, Hose	28	130-1690	1	Tank, Standpipe
11	503-1114	1	Hose	29	505-0679	2	Nipple, Pipe
12	505-1047	1	Nipple, Pipe - Half	30	505-0669	1	Tee, Pipe
13	505-0453	1	Elbow, Pipe - 90 Degree	31	504-0006	1	Cock, Drain - Long Stem
14	505-1045	1	Nipple, Pipe	32	800-0156	4	Screw, Cap - Hex Head
15	503-0365	2	Clamp, Hose				(3/4-10 x 2-1/2")
16			Hose	33	403-1141	4	Washer, Bevel
	503-1018	1	Non-Regulated System	34	850-0079	4	Washer, Lock - Spring (3/4")
	503-0359	1	Regulated System	35	862-0008	4	Nut, Hex (3/4-10)
17			Nipple, Pipe - Half	36	130-1640	1	Support, Standpipe
	505-0437	2	Non-Regulated System	37	800-0016	2	Screw, Cap - Hex Head
	505-0393	2	Regulated System				(3/8-16 x 1-1/4")
18	505-0042	2	Elbow, Pipe	38	850-0051	2	Washer, Lock - Spring (3/8")
19	505-0258	2	Nipple Pipe	39	862-1003	2	Nut, Hex (3/8-16)
20	505-0270	1	Bushing, Reducer - Hex	40	130-1182	1	Guard, Belt
				41	130-1373	1	Guard, Belt

Air Duct Flanges



STYLE I



STYLE II

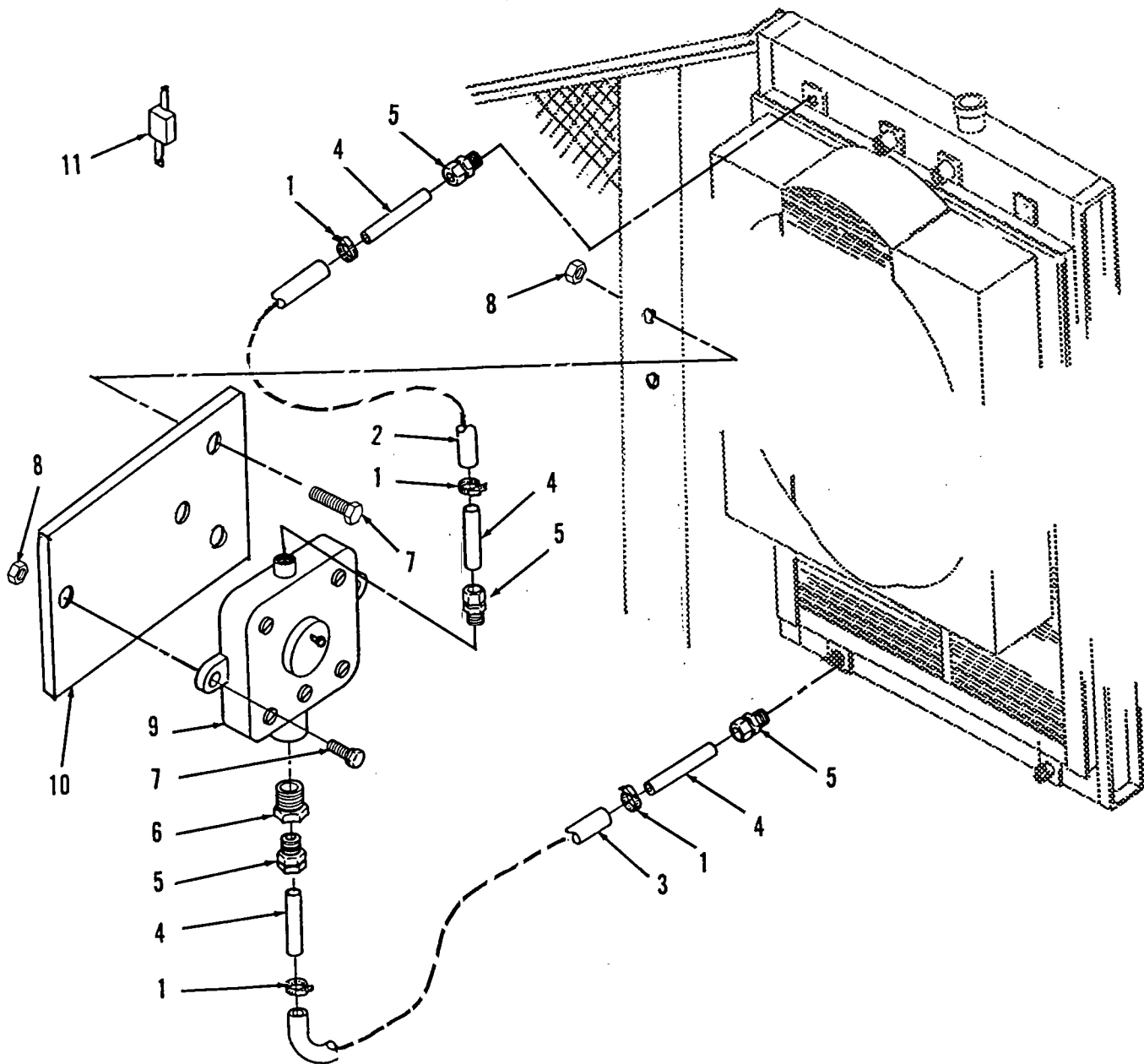
CS-1077

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
*Style "I" Radiator Guard			
2	821-0010	28	Screw, Self-locking - Hex (1/4-20 x 1/2")
3	862-0001	10	Nut, Hex (1/4-20)
4	800-0032	10	Screw, Cap - Hex Head (5/16-18 x 1-3/4")
5	526-0115	10	Washer, Flat (5/16")
6	862-0015	10	Nut, Hex (5/16-18)
7	850-0045	10	Washer, Lock - Spring (5/16")
8	402-0017	10	Spacer, Sleeve
9	370-1025	12	Angle, Mounting
10	130-1114	2	Flange, Side - Air Duct
11	130-1115	2	Flange, Top/Bottom - Air Duct

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
*Style "II" Radiator Guard			
13	821-0010	8	Screw, Self-locking - Hex (1/4-20 x 1/2")
14	870-0212	8	Nut, Self-locking - Hex (1/4-20)
15	800-0026	10	Screw, Cap - Hex Head (5/16-18 x 3/4")
16	526-0115	10	Washer, Flat (5/16")
17	862-0015	10	Nut, Hex (5/16-18)
18	850-0045	10	Washer, Lock - Spring (5/16")
19	130-1419	2	Flange, Top/Bottom - Air Duct
20	130-1420	2	Flange, Side - Air Duct

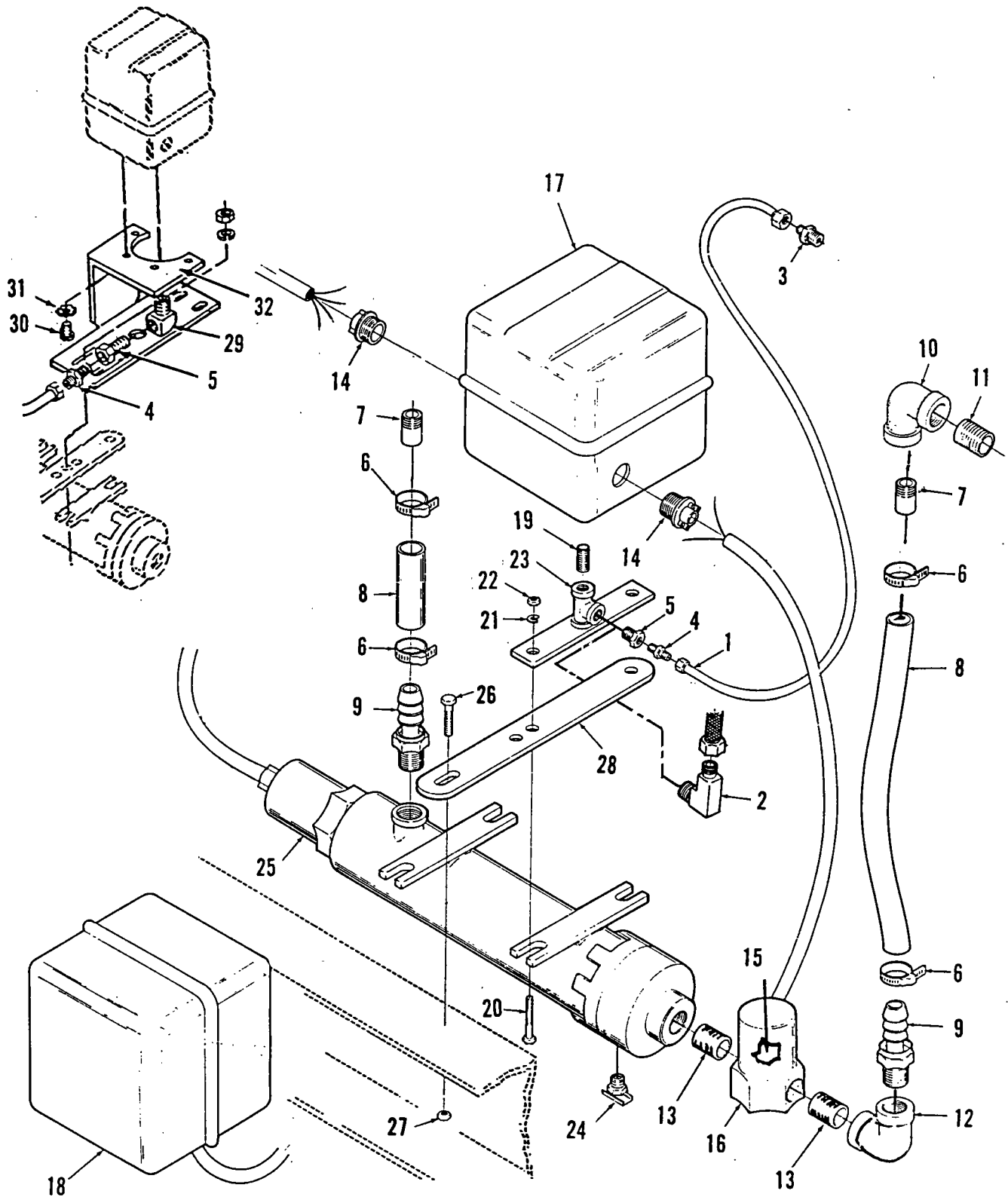
* - Radiator Guard Supplied as Part of The Radiator by its Manufacturer.

Coolant Level Switch



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0685	4	Clamp, Hose	7	821-0011	4	Screw, Self-locking - Hex (1/4-20 x 7/8")
2	503-1199	1	Hose	8	870-0212	4	Nut, Self-locking - Hex (1/4-20)
3	503-1119	1	Hose	9	193-0329	1	Switch, Level - Coolant
4	130-2053	4	Tube	10	301-9373	1	Bracket, Mounting
5	502-0801	4	Connector, Tube, Brass	11	357-0030	2	Diode, Rectifier
6	502-0802	1	Bushing, Reducer - Hex				

Heater Horizontal Tank

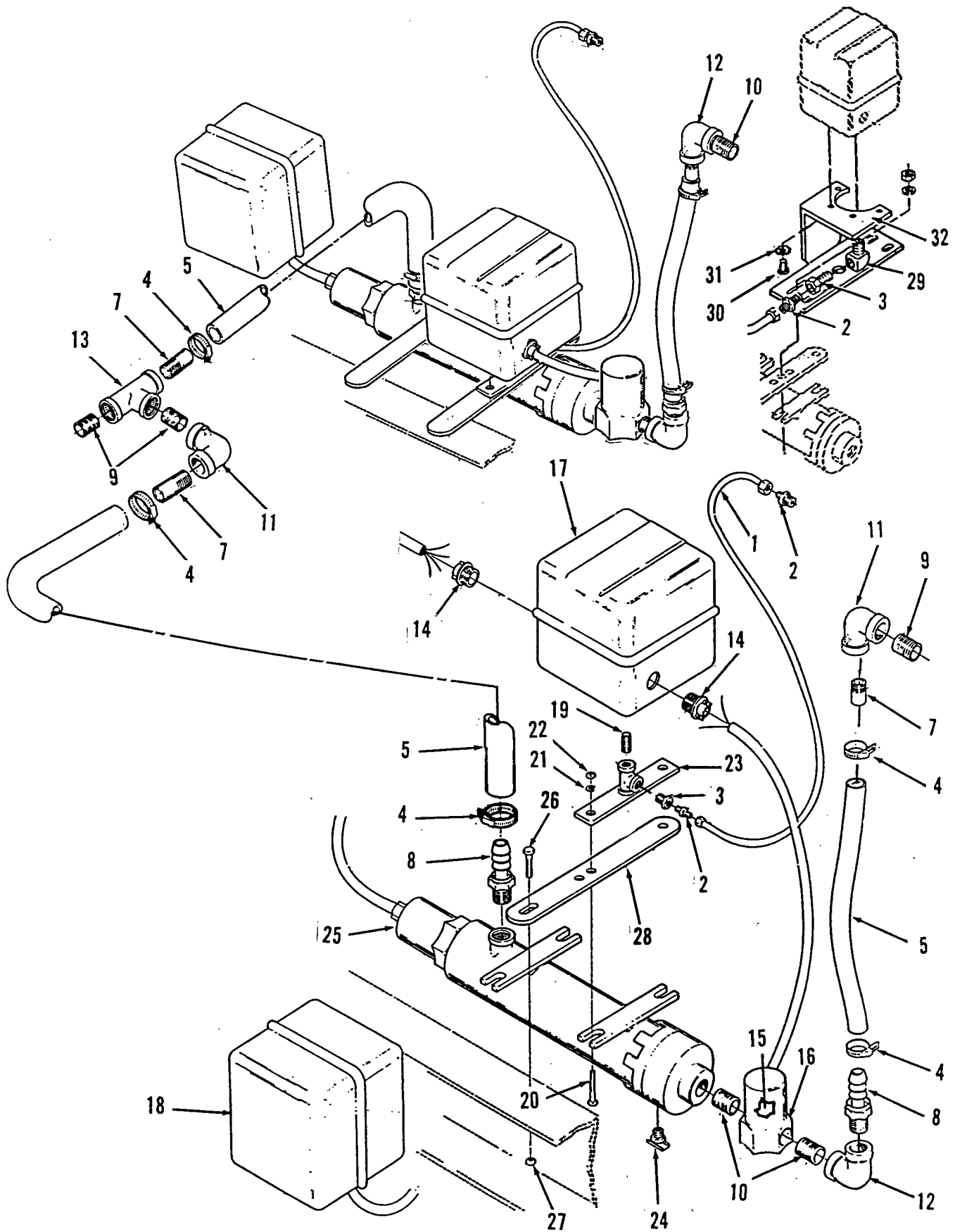


XCS1153

Heater Horizontal Tank

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0188	1	Line, Fuel	19	505-0099	1	Nipple, Pipe - Close (1977 Thru 1982)
2	502-0287	1	Elbow - 90 Degree (1977 Thru 1980)	20	800-0008	4	Screw, Cap - Hex Head (1/4-20 x 1-1/4")
3	502-0193	1	Adapter	21	850-0040	4	Washer, Lock - Spring (1/4")
4	502-0193	1	Adapter (Begin 1981)	22	862-0001	4	Nut, Hex (1/4-20)
5	505-0007	1	Bushing, Reducer - Hex (Begin 1980)	23	333-0142	1	Support with Tee (1970 Thru 1982)
6	503-0429	4	Clamp, Hose	24	504-0003	1	Cock, Drain
7	505-0324	2	Nipple, Pipe - Half	25			Heater, Electrical
8			Hose		333-0143	1	4000 Watt, 208 VAC - 1 Phase
	503-0798	1	45"		333-0164	1	4000 Watt, 208 VAC - 3 Phase
	503-0847	1	30"		333-0138	1	4000 Watt, 240 VAC - 1 Phase
9	505-0759	2	Adapter, Hose to pipe		333-0190	1	4000 Watt, 240 VAC - 3 Phase
10	505-0041	1	Elbow, Pipe - 90 Degree		333-0150	1	4000 Watt, 277 VAC - 1 Phase
11	505-0102	1	Nipple, Pipe - Close		333-0183	1	4000 Watt, 380 VAC - 1 Phase
12	505-0132	1	Elbow, Pipe - 90 Degree		333-0174	1	4000 Watt, 380 VAC - 3 Phase
13	505-0004	2	Nipple, Pipe - Close		333-0161	1	4000 Watt, 480 VAC - 1 Phase
14	331-0027	8	Clamp, Cable		333-0144	1	4000 Watt, 480 VAC - 3 Phase
15			Terminals	26	821-0016	4	Screw, Self-locking - Hex Head (5/16-18 x 3/4")
	323-0957	2	Nut, Wire				Nut, Self-locking, Hex (5/16-18)
	332-0149	8	Lug, Terminal	27	870-0257	4	Bracket, Mounting
16			Switch, Thermostatic	28	130-1191	2	Elbow, Pipe - Street, 90 Degree (Begin 1983)
	309-0304	1	80° - 100° Fahrenheit	29	502-0054	1	Screw, Machine - Round Head (#8-32 x 1/2") (Begin 1983)
	309-0490	1	100° - 120° Fahrenheit				Washer, Lock - ET (#8) (Begin 1983)
	309-0253	1	120° - 140° Fahrenheit	30	812-0079	4	Bracket, Support (Begin 1983)
17	309-0307	1	Switch, Pressure - Oil	31	854-0007	4	
18			Contactor	32	333-0224	1	
	307-1460	1	230 VAC, 3 Pole				
	307-1164	1	460 VAC, 3 Pole				

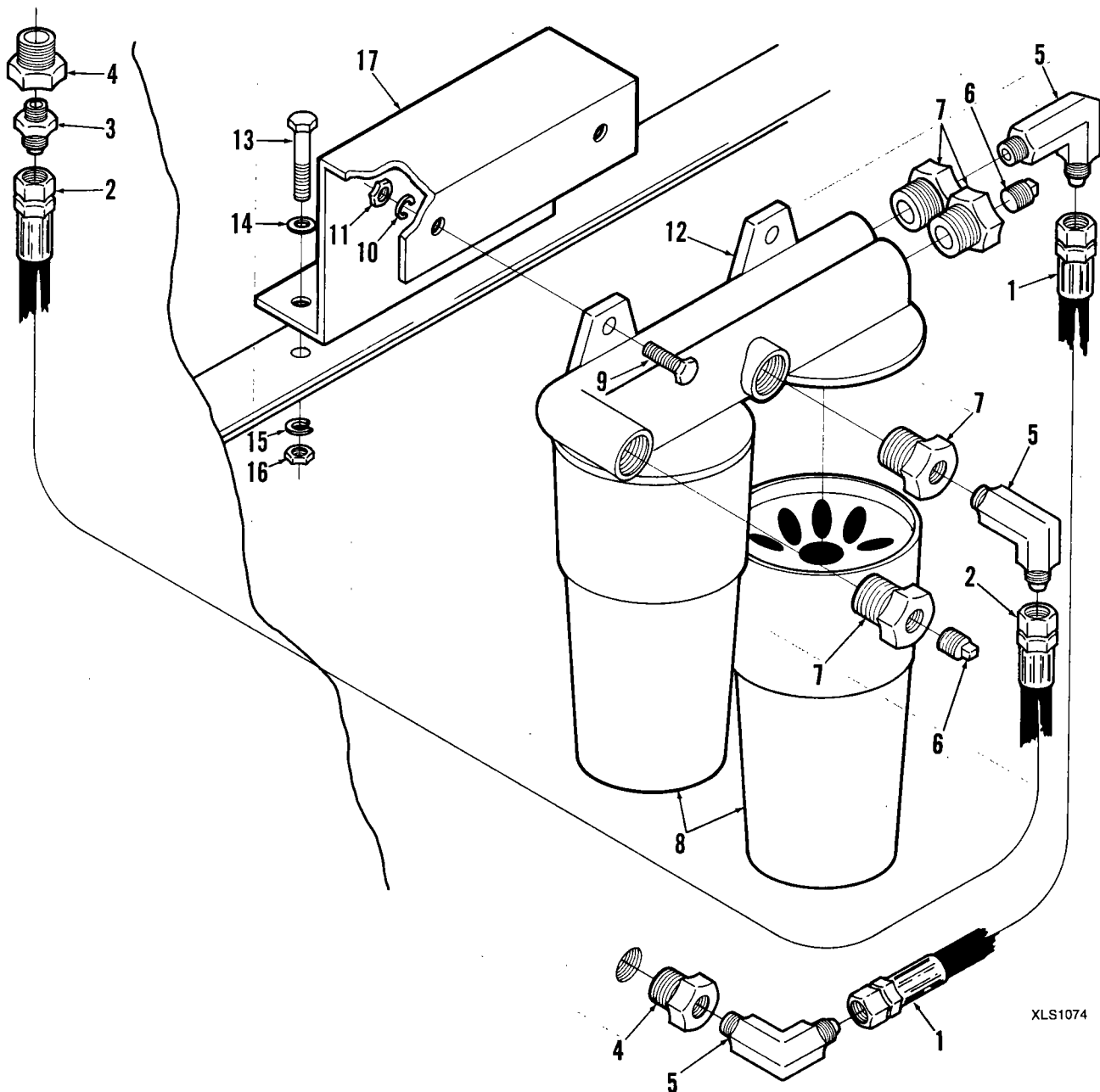
Dual Heater Horizontal Tank



Dual Heater Horizontal Tank

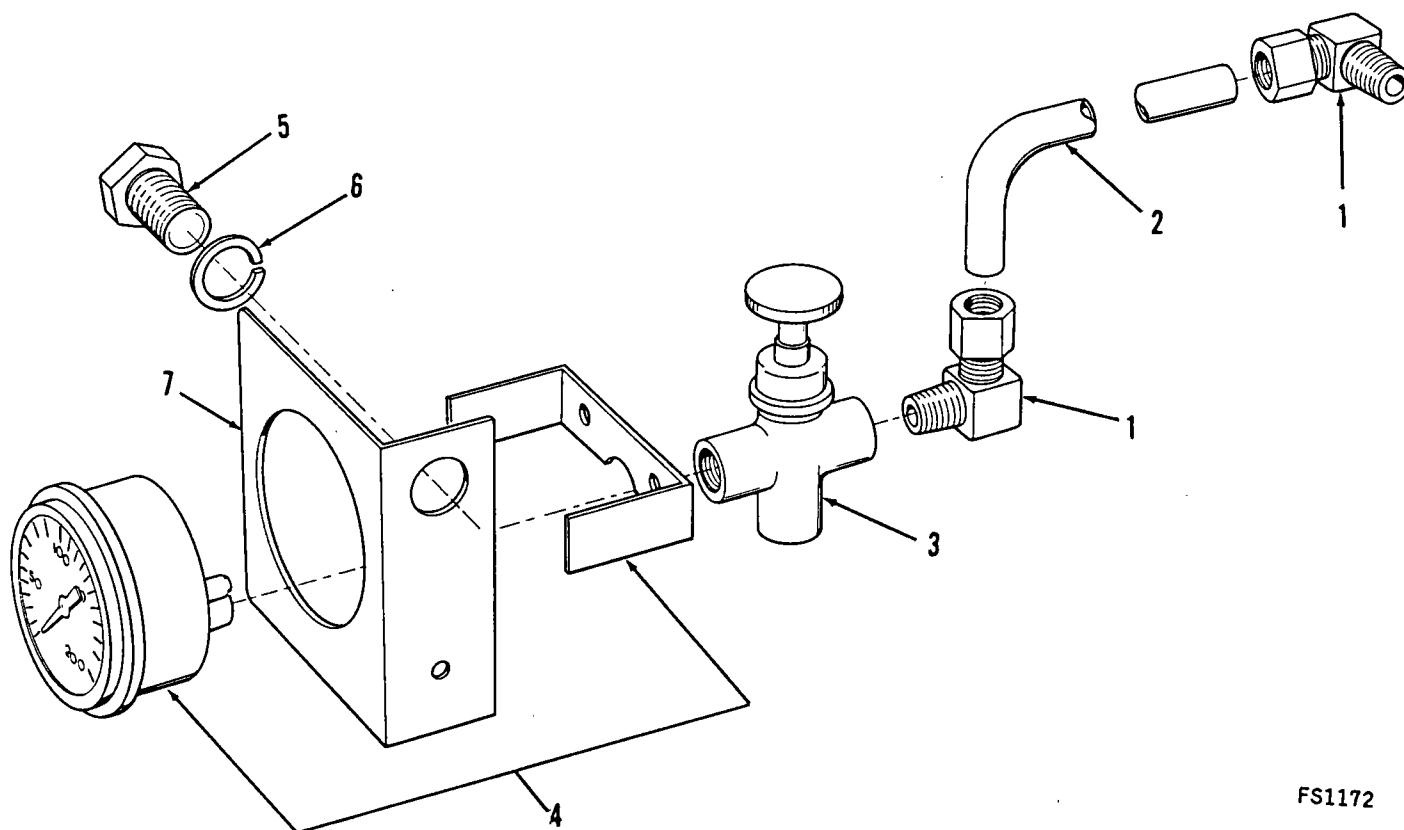
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0188	2	Line, Fuel	20	800-0008	8	Screw, Cap - Hex Head (1/4-20 x 1-1/4")
2	502-0193	4	Adapter	21	850-0040	8	Washer, Lock - Spring (1/4")
3	505-0007	2	Bushing, Reducer - Hex	22	862-0001	8	Nut, Hex (1/4-20)
4	503-0398	8	Clamp, Hose	23	333-0142	2	Support with Tee (1970 Thru 1982)
5			Hose	24	504-0003	2	Cock, Drain
	503-0796	1	40"	25			Heater, Electrical
	503-0847	1	30"		333-0143	2	4000 Watt, 208 VAC - 1 Phase
	503-0964	2	52"		333-0164	2	4000 Watt, 208 VAC - 3 Phase
7	505-0324	3	Nipple, Pipe - Half		333-0138	2	4000 Watt, 240 VAC - 1 Phase
8	505-0759	5	Adapter, Hose to pipe		333-0190	2	4000 Watt, 240 VAC - 3 Phase
9	505-0102	3	Nipple, Pipe - Close		333-0150	2	4000 Watt, 277 VAC - 1 Phase
10	505-0004	5	Nipple, Pipe - Close		333-0183	2	4000 Watt, 380 VAC - 1 Phase
11	505-0132	1	Elbow, Pipe - 90 Degree		333-0174	2	4000 Watt, 380 VAC - 3 Phase
12	505-0041	3	Elbow, Pipe - 90 Degree		333-0161	2	4000 Watt, 480 VAC - 1 Phase
13	505-0166	1	Tee, Pipe		333-0144	2	4000 Watt, 480 VAC - 3 Phase
14	331-0027	8	Clamp, Cable	26	821-0016	8	Screw, Self-locking - Hex Head (5/16-18 x 3/4")
15			Terminals				Nut, Self-locking, Hex (5/16-18)
	323-0957	2	Nut, Wire	27	870-0257	8	Bracket, Mounting
	332-0149	8	Lug, Terminal	28	130-1191	4	Elbow, Pipe - Street, 90 Degree (Begin 1983)
16			Switch, Thermostatic	29	502-0054	2	Screw, Machine - Round Head (#8-32 x 1/2") (Begin 1983)
	309-0304	2	80° - 100° Fahrenheit	30	812-0079	8	Washer, Lock - ET (#8) (Begin 1983)
	309-0490	2	100° - 120° Fahrenheit	31	854-0007	8	Bracket, Support (Begin 1983)
	309-0253	2	120° - 140° Fahrenheit				
17	309-0307	2	Switch, Pressure - Oil				
18			Contactactor				
	307-1460	2	230 VAC, 3 Pole				
	307-1164	2	460 VAC, 3 Pole				
19	505-0099	2	Nipple, Pipe - Close (1977 Thru 1982)	32	333-0224	2	

Lube Oil Filter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0380	1	Line, Fuel	10	850-0055	2	Washer, Lock - Spring (7/16")
2	501-0382	1	Line, Fuel	11	862-0004	2	Nut, Hex (7/16-14)
3	502-0682	1	Adapter, Line to Pipe	12	122-0525	1	Head, Filter
4	505-0021	2	Bushing, Reducer - Hex	13	800-0132	2	Screw, Cap - Hex Head (5/8-11 x 1-3/2")
5	502-0599	3	Elbow, Pipe - Street, 90 Degree	14	526-0004	2	Washer, Flat (5/8")
6	505-0056	2	Plug, Pipe - Square Head	15	850-0070	2	Washer, Lock - Spring (5/8")
7	502-0701	4	Bushing, Reducer - Hex	16	862-0007	2	Nut, Hex (5/8-11)
8	122-0526	2	Element, Filter	17	122-0545	1	Bracket, Mounting
9	800-0075	2	Screw, Cap - Hex Head (7/16-14 x 2")				

Fuel Pressure Gauge

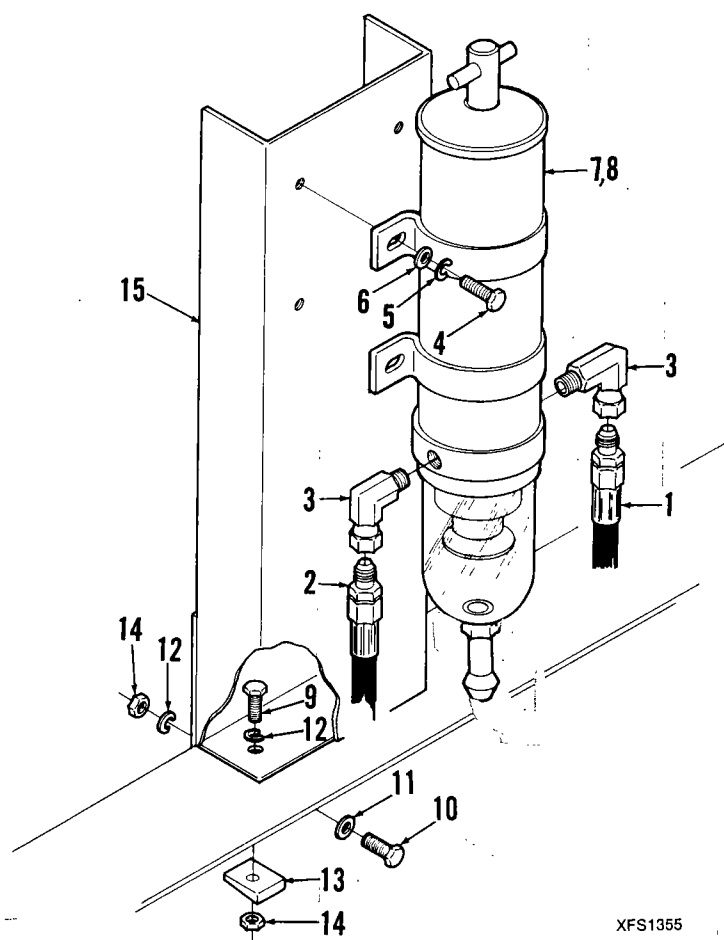


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REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	502-0034	2	Elbow, Tube - 90 Degree (Includes Nut and Ring)
2	370-4003	1	Tube, Copper
3	504-0064	1	Valve, Gate

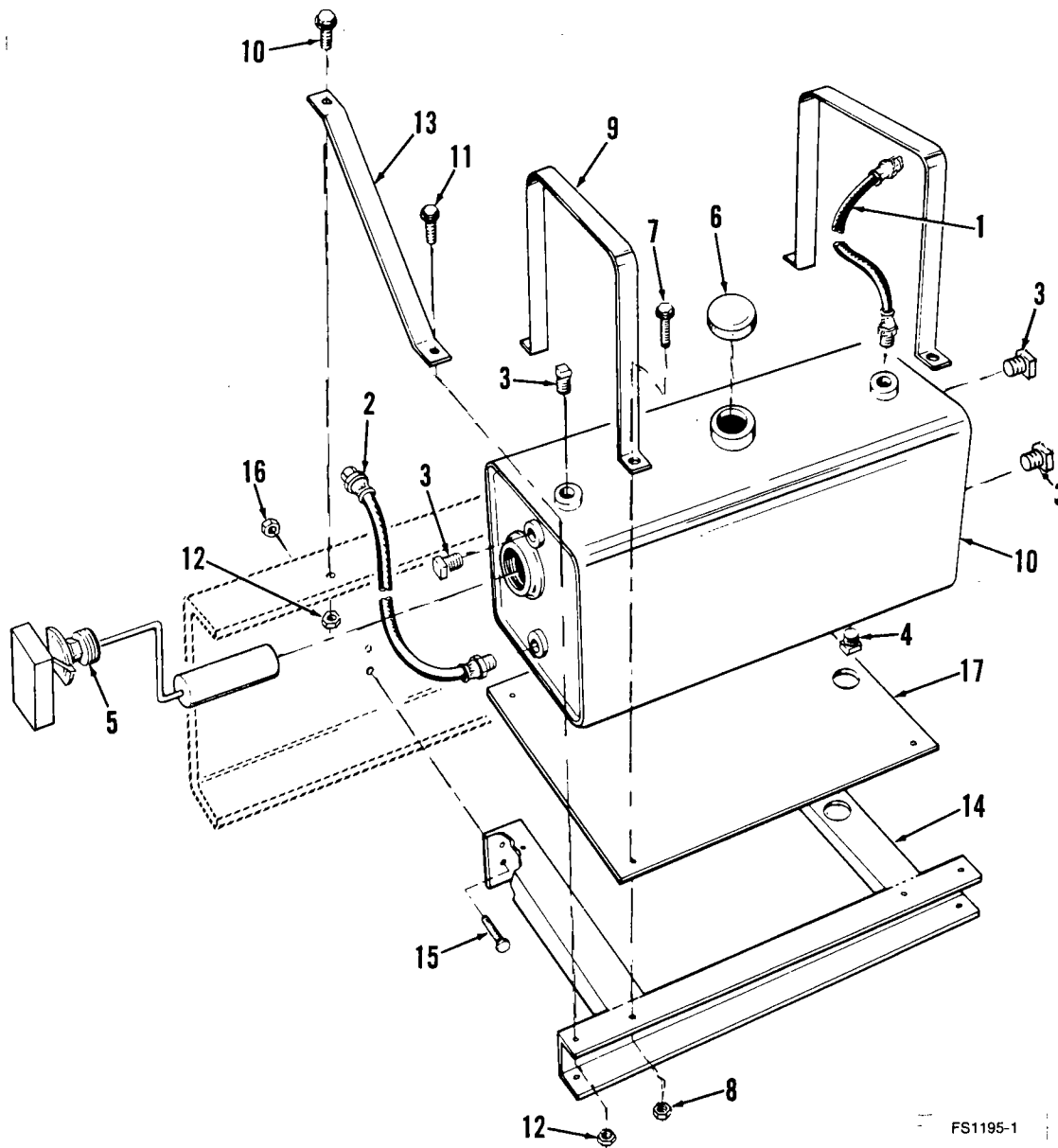
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
4	193-0128	1	Gauge, Pressure (Includes Bracket and Hardware)
5	800-0130	1	Screw, Cap - Hex Head (5/8-11 x 1")
6	850-0070	1	Washer, Lock - Spring (5/8")
7	193-0029	1	Bracket, Mounting

Fuel/Water Separator



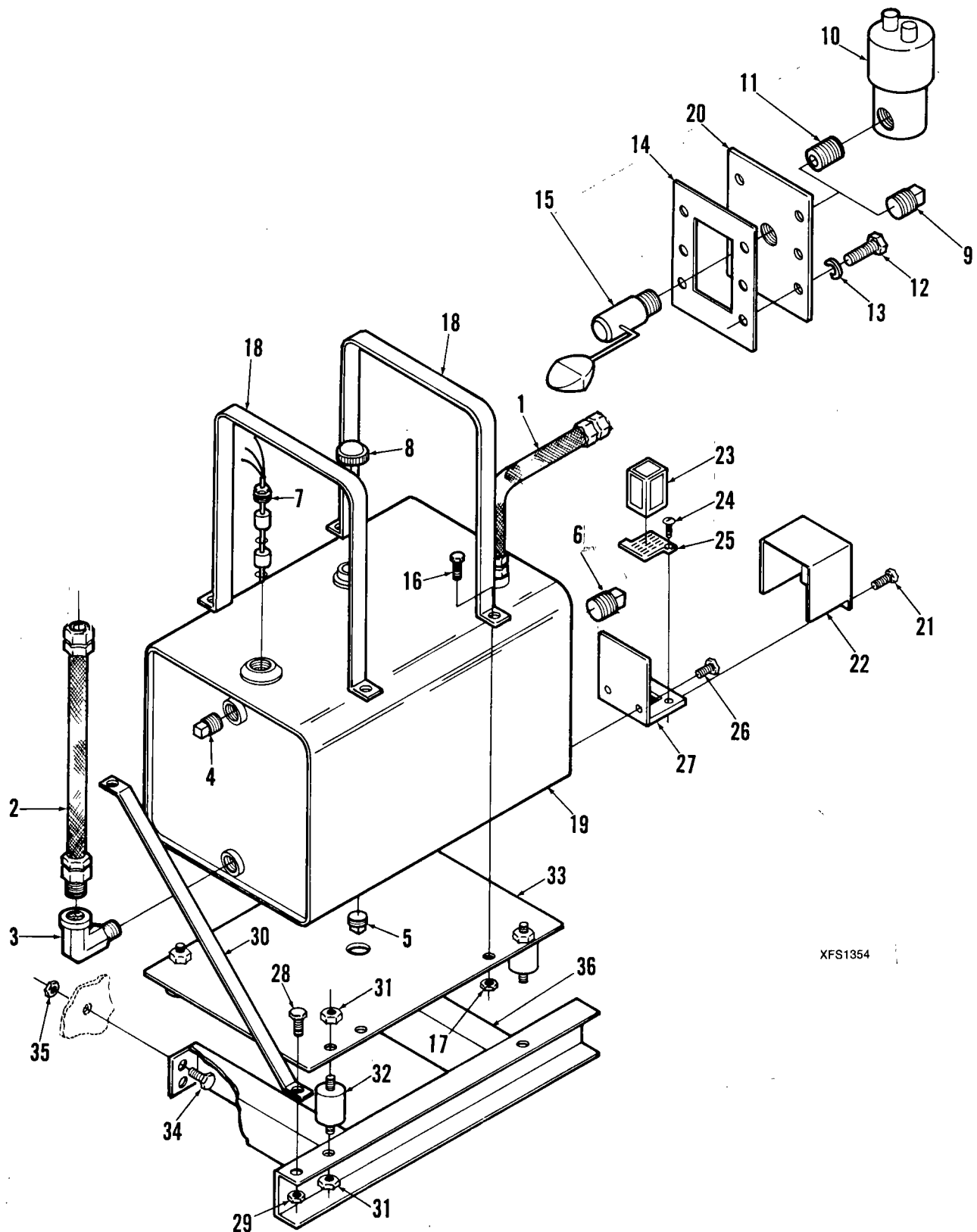
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0292	1	Line, Fuel	9	800-0053	3	Screw, Cap - Hex Head (3/8-16 x 1-3/4")
2	501-0291	1	Line, Fuel	10	800-0051	1	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
3	502-0644	2	Elbow, Pipe - Swivel, 90 Degree	11	526-0026	1	Washer, Flat (3/8")
4	800-0028	4	Screw, Cap - Hex Head (5/16-18 x 1")	12	850-0050	3	Washer, Lock Spring (3/8")
5	850-0045	4	Washer, Lock - Spring (5/16")	13	526-0280	1	Washer, Bevel
6	526-0022	4	Washer, Flat (5/16")	14	862-0003	3	Nut, Hex (3/8-16)
7	149-1625	1	Separator (Includes Element)	15	149-1683	1	Bracket, Mounting
8	149-1689	1	Element				

Fuel Tank



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0248	1	Line, Fuel - Return	8	870-0048	4	Nut, Self-locking - Hex (5/16-18)
	501-0216	1	36" Lg	9	415-0110	2	Strap, Hold Down
	501-0211	1	42" Lg	10	415-0172	1	Tank, Fuel - 25 Gallon
2			65" Lg	11	821-0013	4	Screw, Self-locking - Hex (1/4-20 x 1")
	501-0332	1	Line, Fuel - Incoming	12	870-0065	4	Nut, Self-locking - Hex (1/4-20)
	501-0285	1	30" Lg	13	159-1067	2	Brace
	501-0217	1	36" Lg	14	159-1057	1	Support Channel
3	505-0056	1	52" Lg	15	800-0051	4	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
4	505-0110	1	Plug, Pipe - Square Head	16	870-0138	4	Nut, Self-locking - Hex (3/8-16)
5	415-0170	1	Plug, Pipe - Square Head	17	159-1058	1	Plate, Mounting
6	159-0020	1	Switch, Level				
7	821-0023	4	Cap, Tank				
			Screw, Self-locking - Hex (5/16-18 x 1-1/2")				

Fuel Tank Overhead/Underground Supply

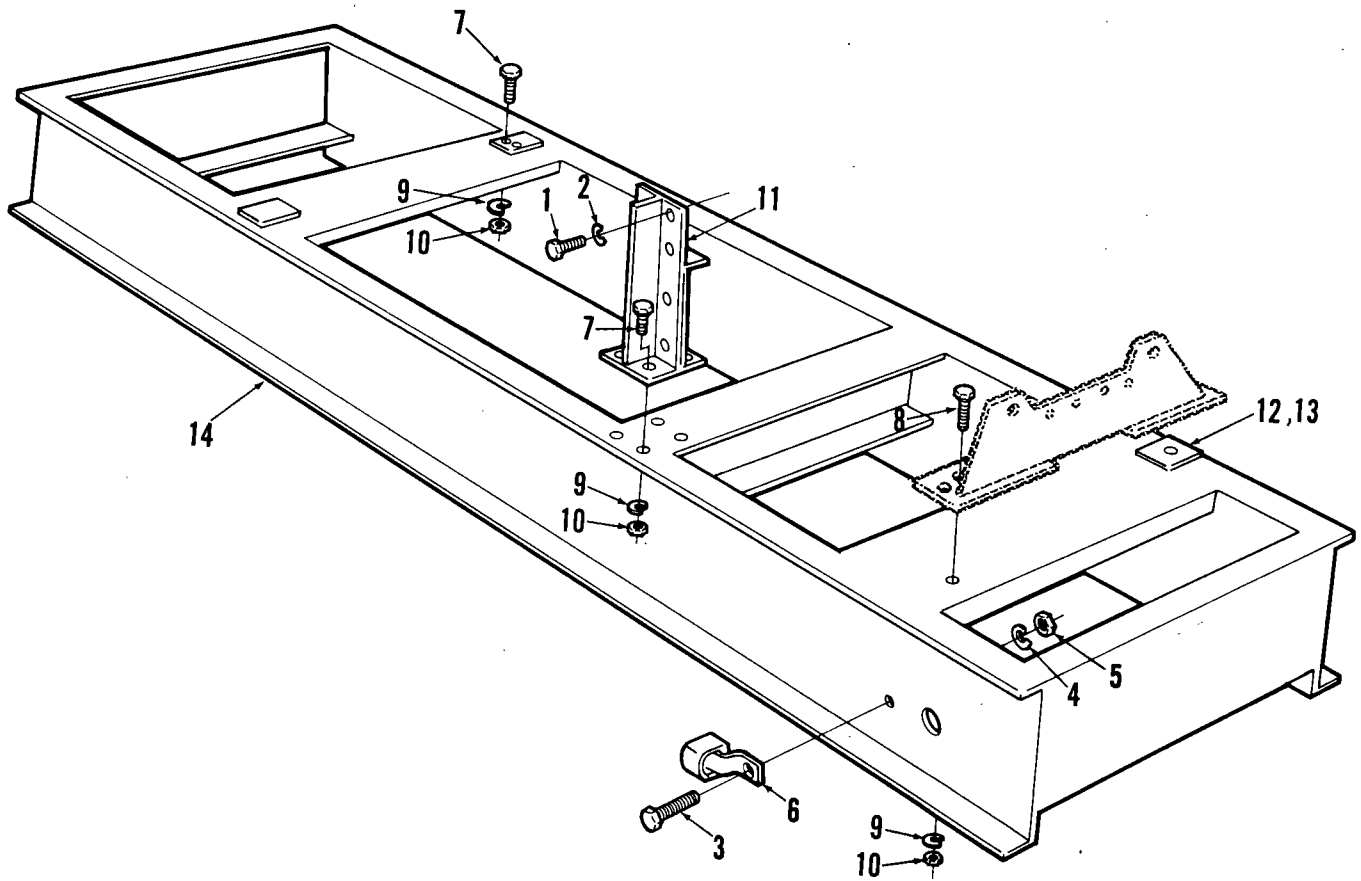


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Fuel Tank Overhead/Underground Supply

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Line, Fuel - Return	18	415-0110	2	Strap
	501-0248	1	36" Lg	19	415-0482	1	Tank, Fuel - 25 Gallon
	501-0216	1	42" Lg	20	415-0513	1	Plate, Access
	501-0211	1	65" Lg	21	821-0004	2	Screw, Self-locking - Hex (#10-32 x 5/16")
2			Line, Fuel - Incoming	22	415-0464	1	Cover, Access
	501-0332	1	30" Lg	23	307-1056	1	Relay
	501-0285	1	36" Lg	24	812-0079	2	Screw, Machine - Round Head (#8-32 x 1/2")
	501-0217	1	52" Lg	25	323-0804	1	Socket, Relay
3	502-0133	1	Elbow, Pipe - Street, 90 Degree	26	821-0008	2	Screw, Self-locking - Hex (1/4-20 x 5/16")
4	505-0130	1	Plug, Pipe - Square Head	27	415-0463	1	Box
5	505-0110	1	Plug, Pipe - Square Head	28	821-0013	8	Screw, Self-locking - Hex (1/4-20 x 1")
6	505-0056	1	Plug, Pipe - Square Head	29	870-0065	4	Nut, Self-locking - Hex (1/4-20)
7	415-0485	1	Switch, Float	30	159-1059	2	Brace, Support - Tank
8	159-0020	1	Cap, Tank	31	870-0048	8	Nut, Self-locking - Hex (5/16-18)
9	505-0056	1	Plug, Pipe (Underground Supply)	32	402-0485	4	Mount, Vibration
10	307-1861	1	Valve, Solenoid (Overhead Supply)	33	415-0483	1	Plate, Mounting
11	505-0100	1	Nipple, Pipe - Close	34	800-0051	4	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
12	800-0002	8	Screw, Cap - Hex Head (1/4-20 x 3/8")	35	870-0138	4	Nut, Self-locking - Hex (3/8-16)
13	526-0063	8	Washer, Flat (1/4")	36	159-1057	1	Frame, Support - Tank
14	415-0486	1	Gasket				
15	309-0407	1	Valve, Float (Overhead Supply)				
16	821-0023	4	Screw, Self-locking - Hex (5/16-18 x 1-1/2")				
17	870-0048	4	Nut, Self-locking - Hex (5/16-18)				

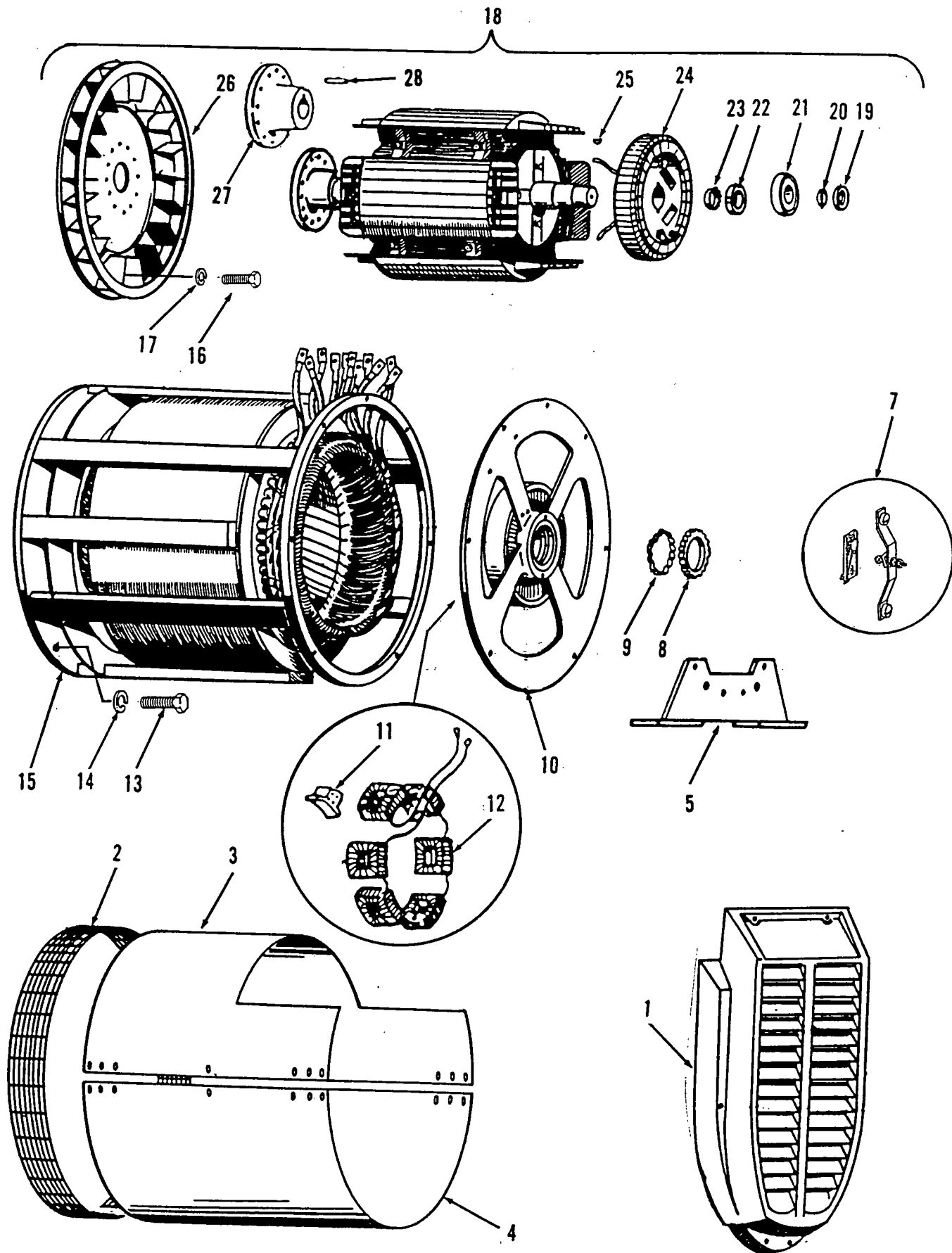
Chassis



Chassis

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0132	4	Screw, Cap - Hex Head (5/8-11 x 1-1/2")	8	800-0157	2	Screw, Cap - Hex Head (3/4-10 x 2-1/2")
2	850-0070	4	Washer, Lock - Spring (5/8")	9	850-0079	14	Washer, Lock - Spring (3/4")
3	800-0051	1	Screw, Cap - Hex Head (3/8-16 x 1-1/4")	10	862-0020	14	Nut, Hex (3/4-10)
4	850-0050	1	Washer, Lock - Spring (3/8")	11	403-1360	2	Brace, Support
5	862-0003	1	Nut, Hex (3/8-16)	12	232-1489	6	Shim
6	332-2001	1	Lug, Terminal - Solderless	13	232-1490	6	Shim
7	800-0156	12	Screw, Cap - Hex Head (3/4-10 x 2-1/2")	14	403-1363	1	Base, Skid

Generator Begin Spec E



G1117

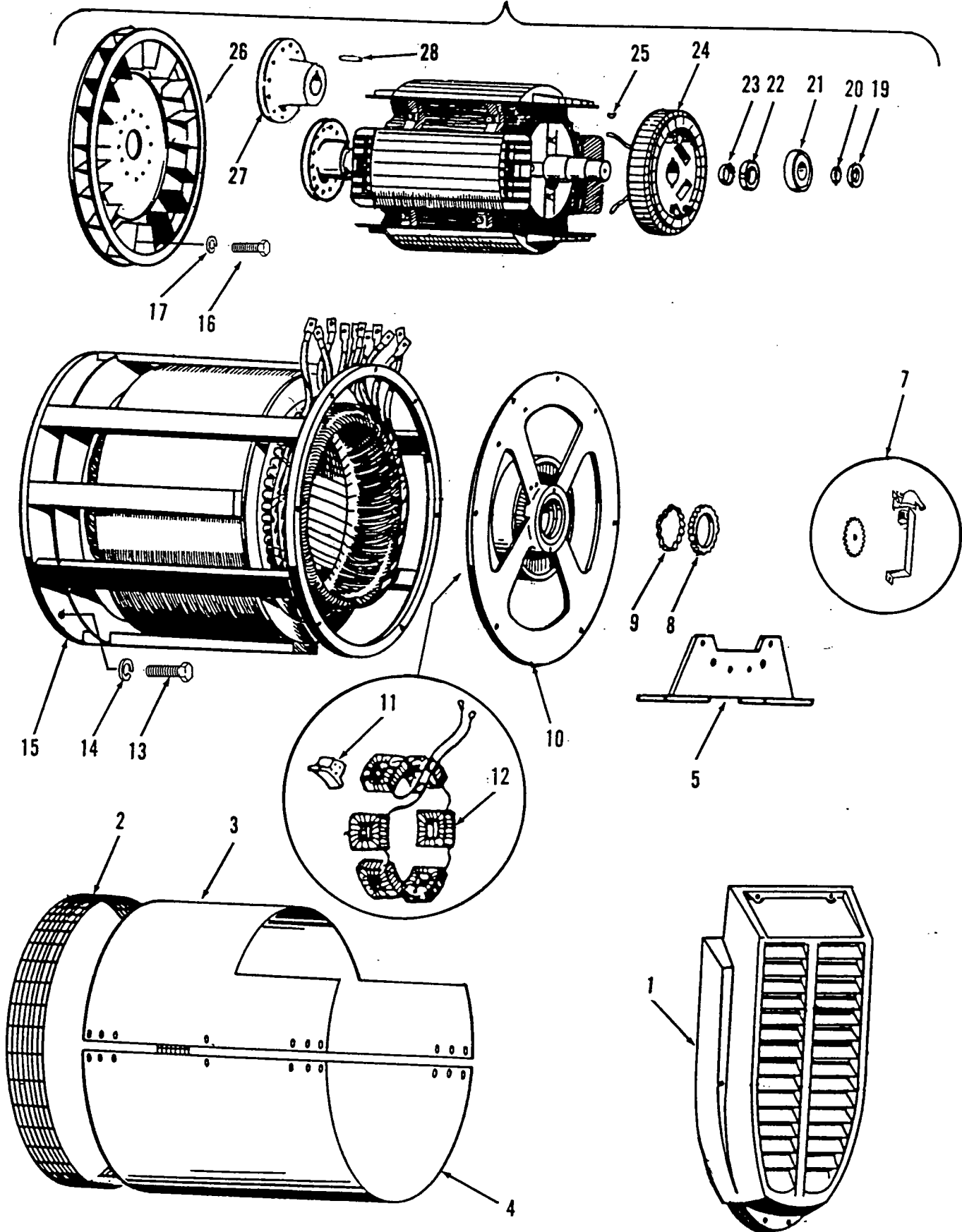
Generator Begin Spec E

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	232-1973	1	Grille	220-2776	1	Code 7	
	520-0692	2	Stud (5/16-18)	220-2769	1	Code 7X	
	800-0009	4	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	220-2773	1	Code 9X	
	800-0013	2	Screw, Cap - Hex Head (1/4-20 x 2-1/2")	220-3290	1	Code 31	
	850-0040	6	Washer, Lock - Spring (1/4")	220-2772	1	No Code 139/240V	
	850-0070	4	Washer, Lock - Spring (5/16")	220-2794	1	Code 519	
	862-0007	4	Nut, Hex (5/16-18)	220-2793	1	Code 520	
2	234-0272	1	Screen	220-2796	1	Code 521	
	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")	220-2795	1	Code 522	
	850-0040	2	Washer, Lock - Spring (1/4")			500 kW Sets	
3			Band, Top	220-2785	1	Code 4	
	234-0289	1	385kW 50Hz, 450kW 60Hz	220-2786	1	Code 4X	
	234-0290	1	450kW 50Hz, 500kW 60Hz	220-2789	1	Code 5D	
	234-0291	1	550kW 50Hz, 600kW 60Hz	220-2790	1	Code 6D	
	800-0026	2	Screw, Cap - Hex Head (5/16-18 x 3/4")	220-2791	1	Code 7	
	850-0045	2	Washer, Lock - Spring (5/16")	220-2784	1	Code 7X	
4			Band, Bottom	220-2788	1	Code 9X	
	234-0279	1	385kW 50Hz, 450kW 60Hz	220-3305	1	Code 31	
	234-0280	1	450kW 50Hz, 500kW 60Hz	220-2787	1	No Code 139/240V	
	234-0281	1	550kW 50Hz, 600kW 60Hz			550 kW Sets	
	800-0026	2	Screw, Cap - Hex Head (5/16-18 x 3/4")	220-2809	1	Code 519	
	850-0045	2	Washer, Lock - Spring (5/16")	220-2808	1	Code 520	
5	232-1957	1	Support	220-2811	1	Code 521	
	805-0035	2	Bolt, Cap - Hex Head (5/8-11 x 1-1/2")	220-2810	1	Code 522	
7			Switch, Over Speed (See Separate Page for Components)			600 kW Sets	
8	232-1923	1	Holder, Bearing	220-2800	1	Code 4	
9	232-1924	1	Spring, Holder	220-2801	1	Code 4X	
10	211-0170	1	Bell, End (Includes Coil and Pole Shoes)	220-2804	1	Code 5D	
11	221-0153	6	Shoe, Pole	220-2805	1	Code 6D	
	800-0031	12	Screw, Cap - Hex Head (5/16-18 x 1-1/2")	220-2806	1	Code 7	
12	222-1693	1	Set, Coil - Field	220-2799	1	Code 7X	
13	800-0092	16	Screw, Cap - Hex Head (1/2-13 x 1-1/2")	220-2803	1	Code 9X	
14	850-0060	16	Washer, Lock - Spring (1/2")	220-3320	1	Code 31	
15			Stator (Includes Bus Bar Assembly - See Separate Page for Bus Bar Components)	220-2802	1	No Code 139/240V	
			385 kW Sets	16	800-0133	6	Screw, Cap - Hex Head (5/8-11 x 1-3/4")
	220-2779	1	Code 519	17	850-0070	6	Washer, Lock - Spring (5/8")
	220-2778	1	Code 520	18			Rotor Assembly (Includes Parts Marked * and were indi Parts Marked +)
	220-2781	1	Code 521				+385kW, Code 519, 520, 521, 522
	220-2780	1	Code 522	201-1787	1	+450kW, Code 4, 4X, 5, 6, 7, 7X	
			450 kW Sets	201-1786	1	+450kW, Code 9X, 31, 139/240V	
	220-2770	1	Code 4	201-1789	1	+450kW, Code 519, 520, 521, 522	
	220-2771	1	Code 4X	201-1788	1	+500kW, Code 4, 4X, 5, 6, 7, 7X	
	220-2774	1	Code 5D	201-1788	1	+500kW, Code 9X, 31, 139/240V	
	220-2775	1	Code 6D	201-3019	1	550kW, Code 519, 520, 521, 522	
				201-3018	1	600kW, Code 4, 4X, 5, 6, 7, 7X	
				201-3018	1	600kW, Code 9X, 31, 139/240V	
				19	510-0091	1	*Nut, Locking - Bearing
				20	510-0093	1	*Washer, Locking - Nut
				21	510-0090	1	*Bearing, Ball
				22	510-0092	1	*Nut, Locking - Exciter
				23	510-0094	1	*Washer, Locking - Nut
				24			*Rotor, Exciter (See Separate Page for Components)
				25	515-0162	1	*Key
				26	232-2833	1	*Disk and Fan Assembly
					805-0035	12	*Bolt, Cap - Hex Head (5/8-11 x 1-1/2")
				27	232-1870	1	**Hub
				28	515-0161	1	**Key

* - Parts included in Rotor Assembly.
+ - Parts included in Specific Rotor Assemblies.

Generator
Spec B Thru D

18



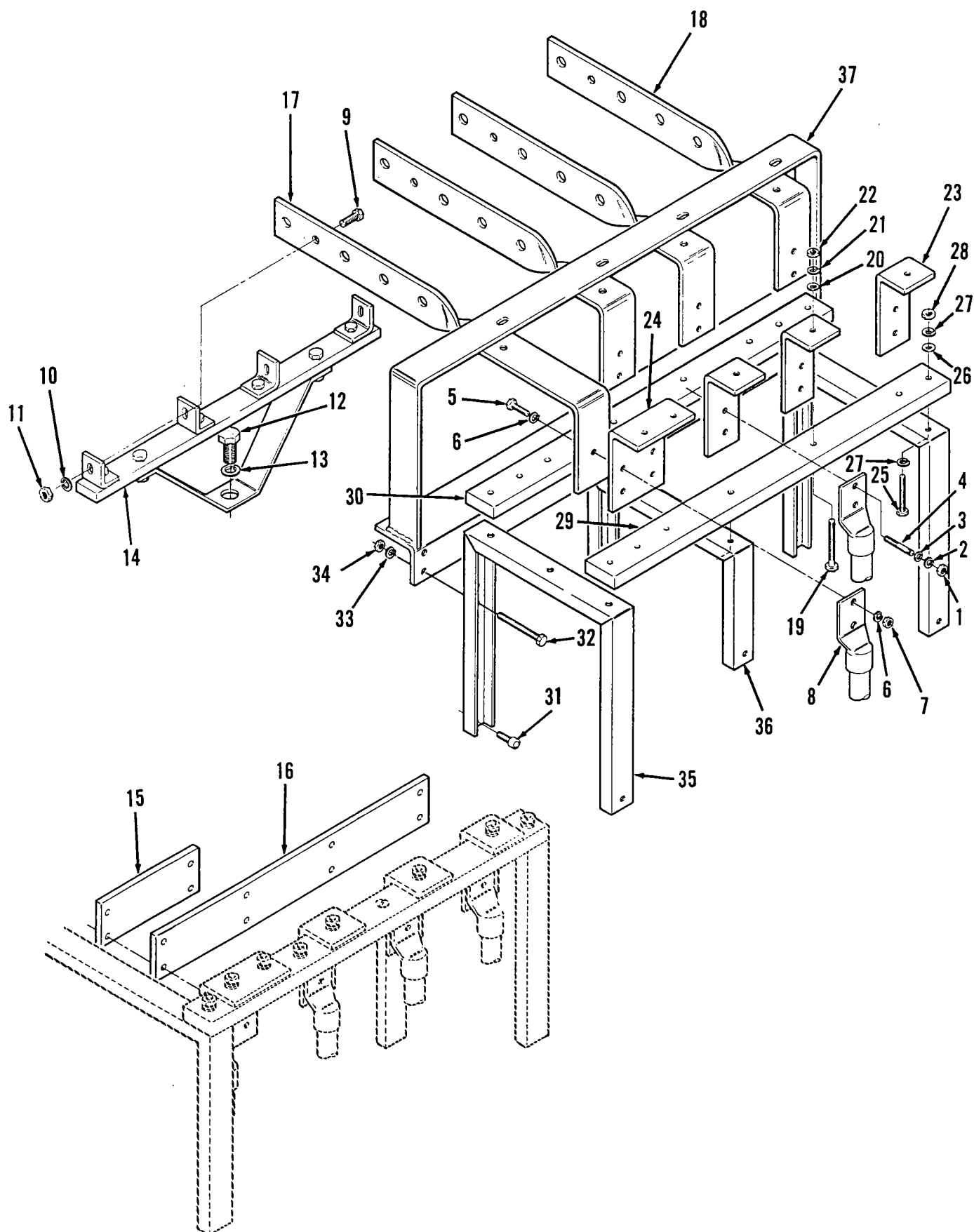
G1117

Generator Spec B Thru D

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	232-1973	1	Grille		220-2776	1	Code 7
	520-0692	2	Stud (5/16-18)		220-2769	1	Code 7X
	800-0009	4	Screw, Cap - Hex Head (1/4-20 x 1-1/2")		220-2773	1	Code 9X
	800-0013	2	Screw, Cap - Hex Head (1/4-20 x 2-1/2")		220-3290	1	Code 31
	850-0040	6	Washer, Lock - Spring (1/4")		220-2772	1	No Code 139/240V
	850-0070	4	Washer, Lock - Spring (5/16")		220-2794	1	Code 519
	862-0007	4	Nut, Hex (5/16-18)		220-2793	1	Code 520
2	234-0272	1	Screen		220-2796	1	Code 521
	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")		220-2795	1	Code 522
	850-0040	2	Washer, Lock - Spring (1/4")				500 kW Sets
3			Band, Top		220-2785	1	Code 4
	234-0289	1	385kW 50Hz, 450kW 60Hz		220-2786	1	Code 4X
	234-0290	1	450kW 50Hz, 500kW 60Hz		220-2789	1	Code 5D
	234-0291	1	550kW 50Hz, 600kW 60Hz		220-2790	1	Code 6D
	800-0026	2	Screw, Cap - Hex Head (5/16-18 x 3/4")		220-2791	1	Code 7
	850-0045	2	Washer, Lock - Spring (5/16")		220-2784	1	Code 7X
4			Band, Bottom		220-2788	1	Code 9X
	234-0279	1	385kW 50Hz, 450kW 60Hz		220-3305	1	Code 31
	234-0280	1	450kW 50Hz, 500kW 60Hz		220-2787	1	No Code 139/240V
	234-0281	1	550kW 50Hz, 600kW 60Hz				550 kW Sets
	800-0026	2	Screw, Cap - Hex Head (5/16-18 x 3/4")		220-2809	1	Code 519
	850-0045	2	Washer, Lock - Spring (5/16")		220-2808	1	Code 520
5	232-1957	1	Support		220-2811	1	Code 521
	805-0035	2	Bolt, Cap - Hex Head (5/8-11 x 1-1/2")		220-2810	1	Code 522
7			Sensor, Over Speed (See Separate Page for Components)	16	800-0133	6	Screw, Cap - Hex Head (5/8-11 x 1-3/4")
8	232-1923	1	Holder, Bearing	17	850-0070	6	Washer, Lock - Spring (5/8")
9	232-1924	1	Spring, Holder	18			Rotor Assembly (Includes Parts Marked * and were indi Parts Marked +)
10	211-0170	1	Bell, End (Includes Coil and Pole Shoes)		201-1787	1	+385kW, Code 519, 520, 521, 522
11	221-0153	6	Shoe, Pole		201-1786	1	+450kW, Code 4, 4X, 5, 6, 7, 7X
	800-0031	12	Screw, Cap - Hex Head (5/16-18 x 1-1/2")		201-1786	1	+450kW, Code 9X, 31, 139/240V
12	222-1693	1	Set, Coil - Field		201-1789	1	+450kW, Code 519, 520, 521, 522
13	800-0092	16	Screw, Cap - Hex Head (1/2-13 x 1-1/2")		201-1788	1	+500kW, Code 4, 4X, 5, 6, 7, 7X
14	850-0060	16	Washer, Lock - Spring (1/2")		201-1788	1	+500kW, Code 9X, 31, 139/240V
15			Stator (Includes Bus Bar Assembly - See Separate Page for Bus Bar Components)		201-3019	1	550kW, Code 519, 520, 521, 522
			385 kW Sets		201-3018	1	600kW, Code 4, 4X, 5, 6, 7, 7X
	220-2779	1	Code 519		201-3018	1	600kW, Code 9X, 31, 139/240V
	220-2778	1	Code 520	19	510-0091	1	*Nut, Locking - Bearing
	220-2781	1	Code 521	20	510-0093	1	*Washer, Locking - Nut
	220-2780	1	Code 522	21	510-0090	1	*Bearing, Ball
			450 kW Sets	22	510-0092	1	*Nut, Locking - Exciter
	220-2770	1	Code 4	23	510-0094	1	*Washer, Locking - Nut
	220-2771	1	Code 4X	24			*Rotor, Exciter (See Separate Page for Components)
	220-2774	1	Code 5D	25	515-0162	1	*Key
	220-2775	1	Code 6D	26	232-2833	1	*Disk and Fan Assembly
					805-0035	12	*Bolt, Cap - Hex Head (5/8-11 x 1-1/2")
				27	232-1870	1	++Hub
				28	515-0161	1	++Key

* - Parts included in Rotor Assembly.
+ - Parts included in Specific Rotor Assemblies.

Bus Bar Components Dual Insulator Bars



Bus Bar Components Dual Insulator Bars

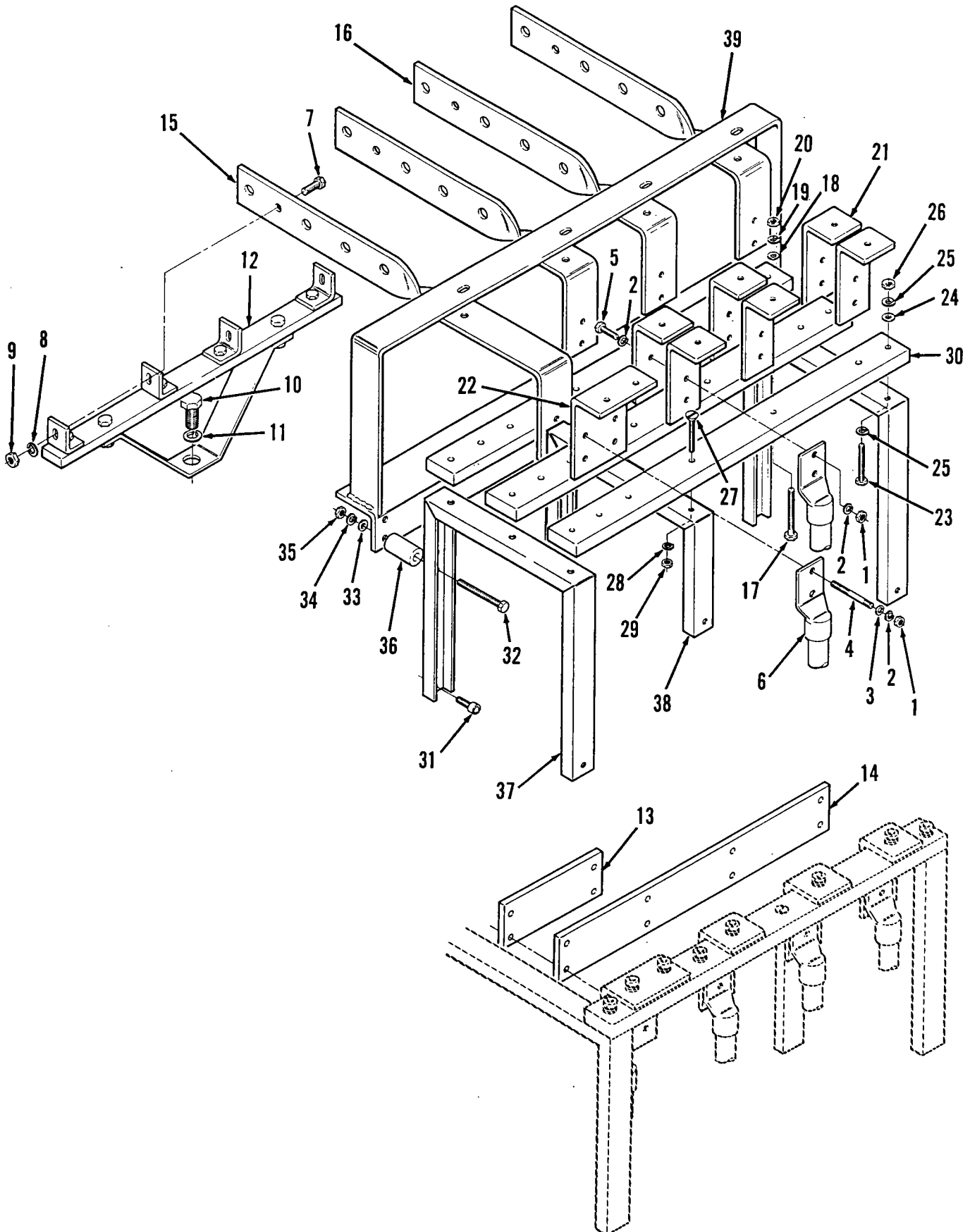
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	862-0015	32	#Nut, Hex (5/16-18)	17			*Bar, Bus
2	850-0045	32	#Washer, Lock - Spring (5/16")	232-1996	1	1/4"W x 17-3/8"Lg	
3	526-0115	32	#Washer, Flat (5/16")	232-2852	1	1/2"W x 19-1/8"Lg	
4	520-0693	16	#Stud	18			*Bar, Bus
5	800-0052	16	@Screw, Cap - Hex Head (3/8-16 x 1-1/2")	232-2001	3	1/4"W x 13-1/4"Lg	
6	850-0050	32	@Washer, Lock - Spring (3/8")	232-2853	3	1/2"W x 15-1/2"LG	
7	862-0003	32	@Nut, Hex (3/8-16)	19			Screw, Cap - Hex Head
8			Terminal	800-0052	9	(3/8-16 x 1-1/2")	
	332-1151	12	#2 Wire Size	800-0053	9	(3/8-16 x 1-3/4")	
	332-1152	12	#1/0 Wire Size	800-0054	9	(3/8-16 x 2")	
	332-1153	12	#2/0 Wire Size	20	526-0029	18	Washer, Flat (3/8")
	332-1154	12	#3/0 Wire Size	21	850-0050	9	Washer, Lock - Spring (3/8")
	332-1155	12	#4/0 Wire Size	22	862-0003	9	Nut, Hex (3/8-16)
	332-1156	12	250 Mil Wire Size	23	232-1990	3	*Bar, Bus
	332-1157	12	300 Mil Wire Size	24	232-1991	1	*Bar, Bus
	332-1158	12	350 Mil Wire Size	25	800-0052	6	Screw, Cap - Hex Head
9	800-0005	4	Screw, Cap - Hex Head (1/4-20 x 3/4")	26	526-0029	12	Washer, Flat (3/8")
10	850-0040	4	Washer, Lock - Spring (1/4")	27	850-0050	6	Washer, Lock - Spring (3/8")
11	862-0001	4	Nut, Hex (1/4-20)	28	862-0003	6	Nut, Hex (3/8-16)
12	800-0151	1	Screw, Cap - Hex Head (3/4-10 x 1")	29	232-1998	1	Board, Insulating
13	850-0079	1	Washer, Lock - Spring (3/4")	30	232-1995	1	Board, Insulating
14		1	Support, Bus Bar (See Separate Page for Components	31	802-0069	6	Screw, Cap - Socket Head
15	232-2005	1	Bar, Bus - Jumper (Used on Delta Applications)	32	800-0005	6	Screw, Cap - Hex Head
16	232-1993	1	Bar, Bus - Jumper (Used on Parallel Wye Applications)	33	850-0040	6	Washer, Lock - Spring (1/4")
				34	862-0001	6	Nut, Hex (1/4-20)
				35	232-1999	2	Bracket, Mounting
				36	232-2000	1	Bracket, Mounting
				37	315-0302	1	Shelf - Current Transformer

- Terminal Hardware used thru June 1981.

@ - Terminal Hardware used beginning July 1981.

* - NOTE: Bus Bars contained tapped holes thru June 1981, beginning July 1981 the Terminal mounting holes were drilled out, requiring hardware marked @.

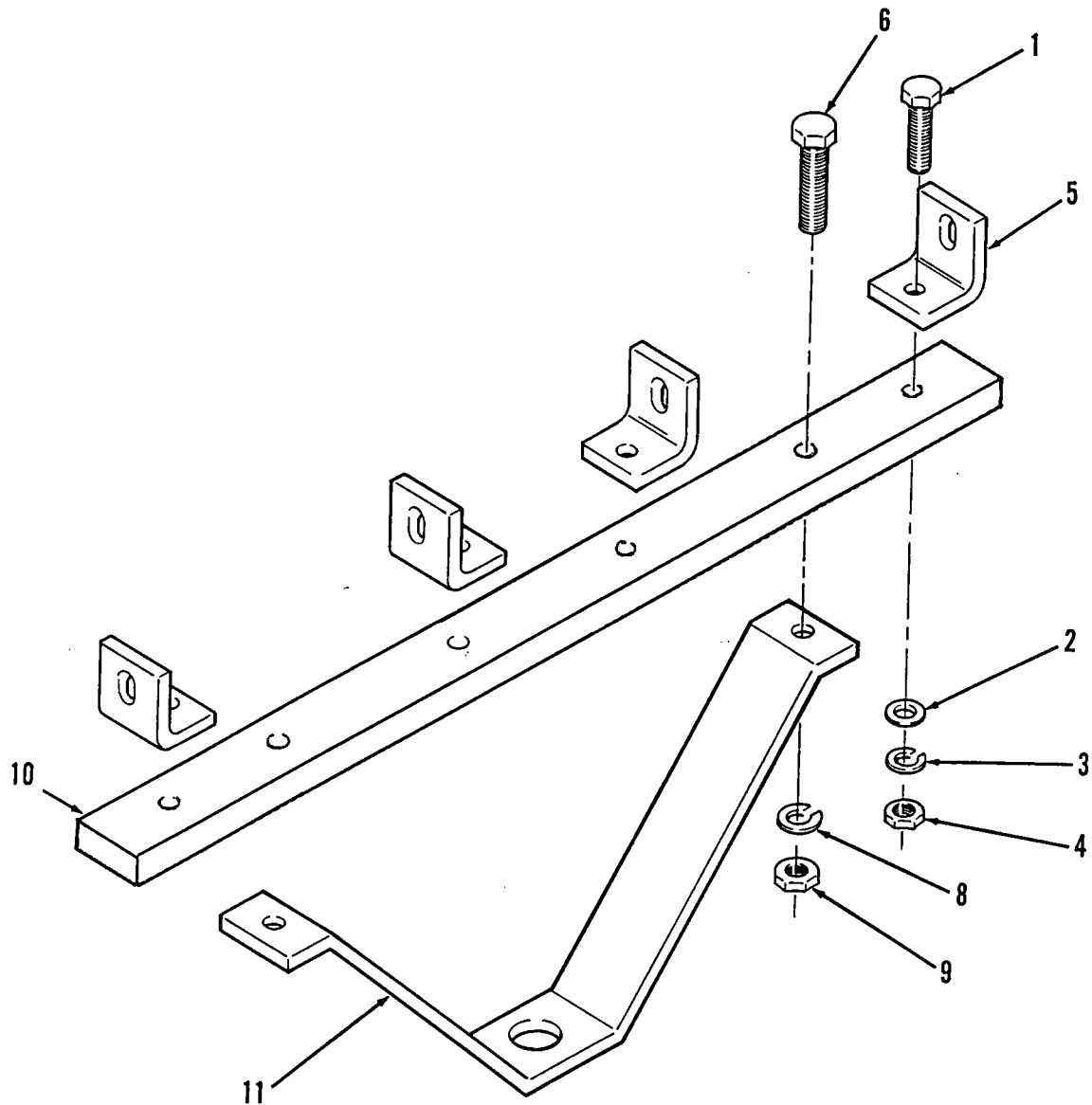
Bus Bar Components Triple Insulator Bars



Bus Bar Components Triple Insulator Bars

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	862-0015	24	Nut, Hex (5/16-18)	16	232-2249	3	Bar, Bus (1/4" x 13-1/4")
2	850-0045	44	Washer, Lock - Spring (5/16")	17	800-0562	11	Screw, Cap - Hex Head (3/8-16 x 2")
3	526-0115	24	Washer, Flat (5/16")	18	526-0029	11	Washer, Flat (3/8")
4	520-0693	2	Stud	19	850-0050	11	Washer, Lock - Spring (3/8")
5	800-0028	20	Screw, Cap - Hex Head (5/16-18 x 1")	20	862-0003	11	Nut, Hex (3/8-16)
6			Terminal	21	232-2758	6	Bar, Bus
	332-1151	12	#2 Wire Size	22	232-2759	1	Bar, Bus
	332-1152	12	#1/0 Wire Size	23	800-0052	8	Screw, Cap - Hex Head (3/8-16 x 1-1/2")
	332-1153	12	#2/0 Wire Size	24	526-0029	16	Washer, Flat (3/8")
	332-1154	12	#3/0 Wire Size	25	850-0050	8	Washer, Lock - Spring (3/8")
	332-1155	12	#4/0 Wire Size	26	862-0003	8	Nut, Hex (3/8-16)
	332-1156	12	250 Mil Wire Size	27	814-0182	1	Screw, Machine - Flat Head (5/16-18 x 1-1/2")
	332-1157	12	300 Mil Wire Size	28	850-0045	1	Washer, Lock - Spring (5/16")
	332-1158	12	350 Mil Wire Size	29	862-0015	1	Nut, Hex (5/16-18)
7	800-0005	4	Screw, Cap - Hex Head (1/4-20 x 3/4")	30	232-1998	3	Board, Insulating
8	850-0040	4	Washer, Lock - Spring (1/4")	31	802-0069	6	Screw, Cap - Socket Head (3/8-16 x 5/8")
9	862-0001	4	Nut, Hex (1/4-20)	32	800-0012	4	Screw, Cap - Hex Head (1/4-20 x 2-1/4")
10	800-0151	1	Screw, Cap - Hex Head (3/4-10 x 1")	33	526-0018	4	Washer, Flat (1/4")
11	850-0079	1	Washer, Lock - Spring (3/4")	34	850-0040	4	Washer, Lock - Spring (1/4")
12		1	Support, Bus Bar (See Separate Page for Components)	35	862-0001	4	Nut, Hex (1/4-20)
13	232-2005	1	Bar, Bus - Jumper (Used on Delta Applications)	36	232-2754	4	Spacer
14	232-1993	1	Bar, Bus - Jumper (Used on Parallel Wye Applications)	37	232-2752	2	Bracket, Mounting
15	232-1996	1	Bar, Bus (1/4" x 17-3/8")	38	232-2753	1	Bracket, Mounting
				39	301-5297	1	Shelf - Current Transformer

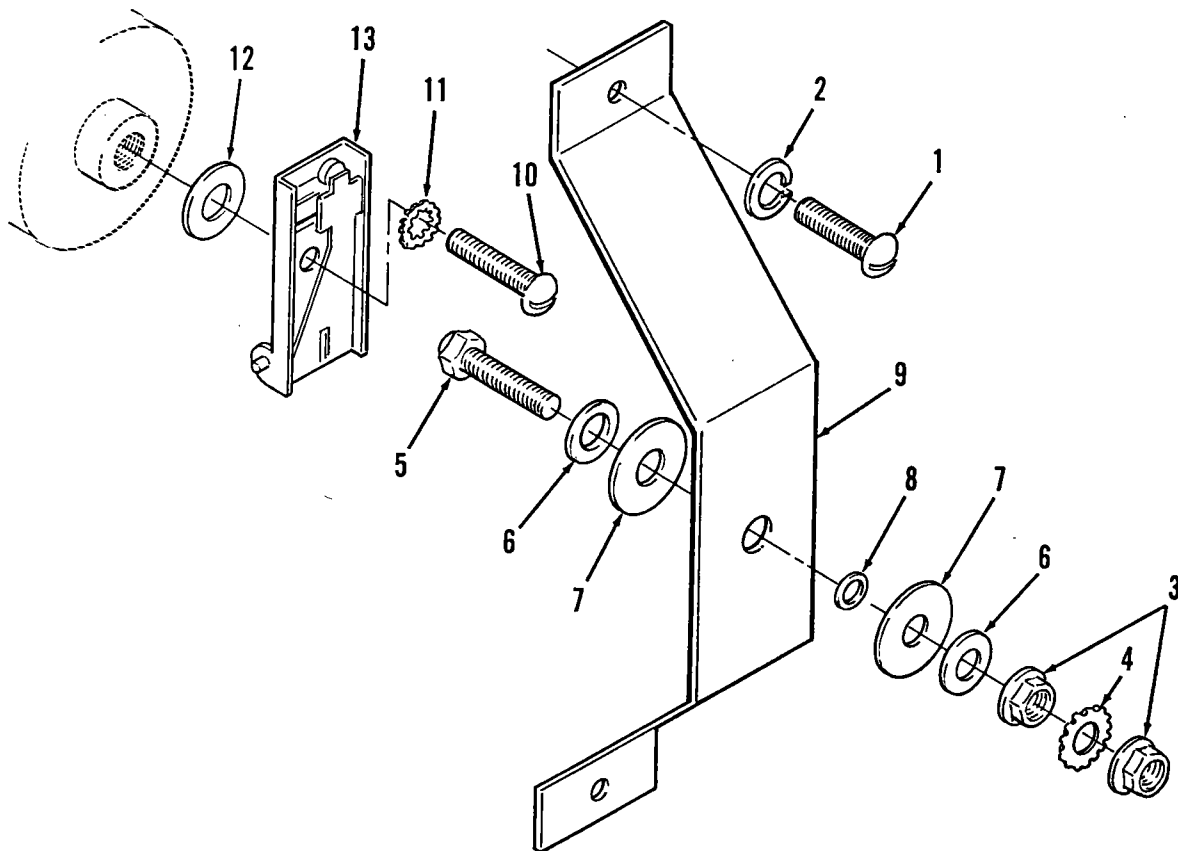
Support Components



244A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0007	4	Screw, Cap - Hex Head (1/4-20 x 1")	6	800-0051	2	Screw, Cap - Hex Head
2	526-0018	4	Washer, Flat (1/4")	7	526-0029	2	Washer, Flat (3/8")
3	850-0040	4	Washer, Lock - Spring (1/4")	8	850-0050	2	Washer, Lock - Spring (3/8")
4	862-0001	4	Nut, Hex (1/4-20)	9	862-0003	2	Nut, Hex (3/8-16)
5	232-1992	4	Bracket	10	232-1997	1	Board, Insulating
				11	232-1994	1	Bracket, Support

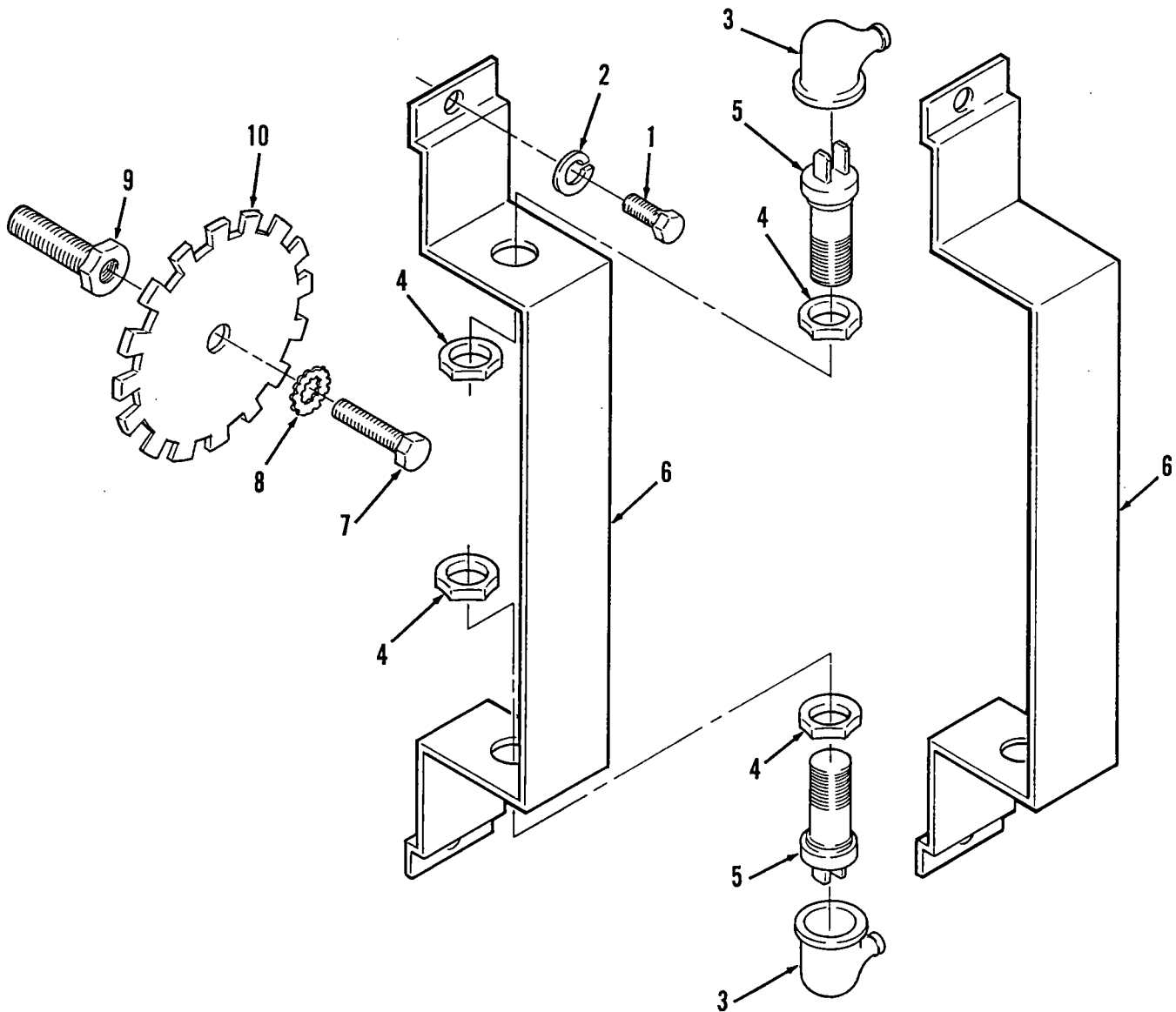
Over Speed Switch Components



241A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	812-0148	2	Screw, Machine - Round Head (1/4-20 x 1/2")	7	508-0018	2	Washer, Insulating
2	850-0040	2	Washer, Lock - Spring (1/4")	8	508-0006	1	Washer, Insulating (3/8"OD)
3	871-0016	2	Nut, Hex - Brass (1/4-20)	9	150-1194	1	Bracket
4	854-0014	1	Washer, Lock - IT (1/4")	10	812-0189	1	Screw, Machine - Round Head (3/8-16 x 3/4")
5	150-0723	1	Contact	11	856-0010	1	Washer, Lock - EIT (3/8")
6	526-0052	2	Washer, Flat - Brass (1/4")	12	526-0030	1	Washer, Flat (3/8")
				13	150-0717	1	Switch, Over Speed

Over Speed Sensor Components

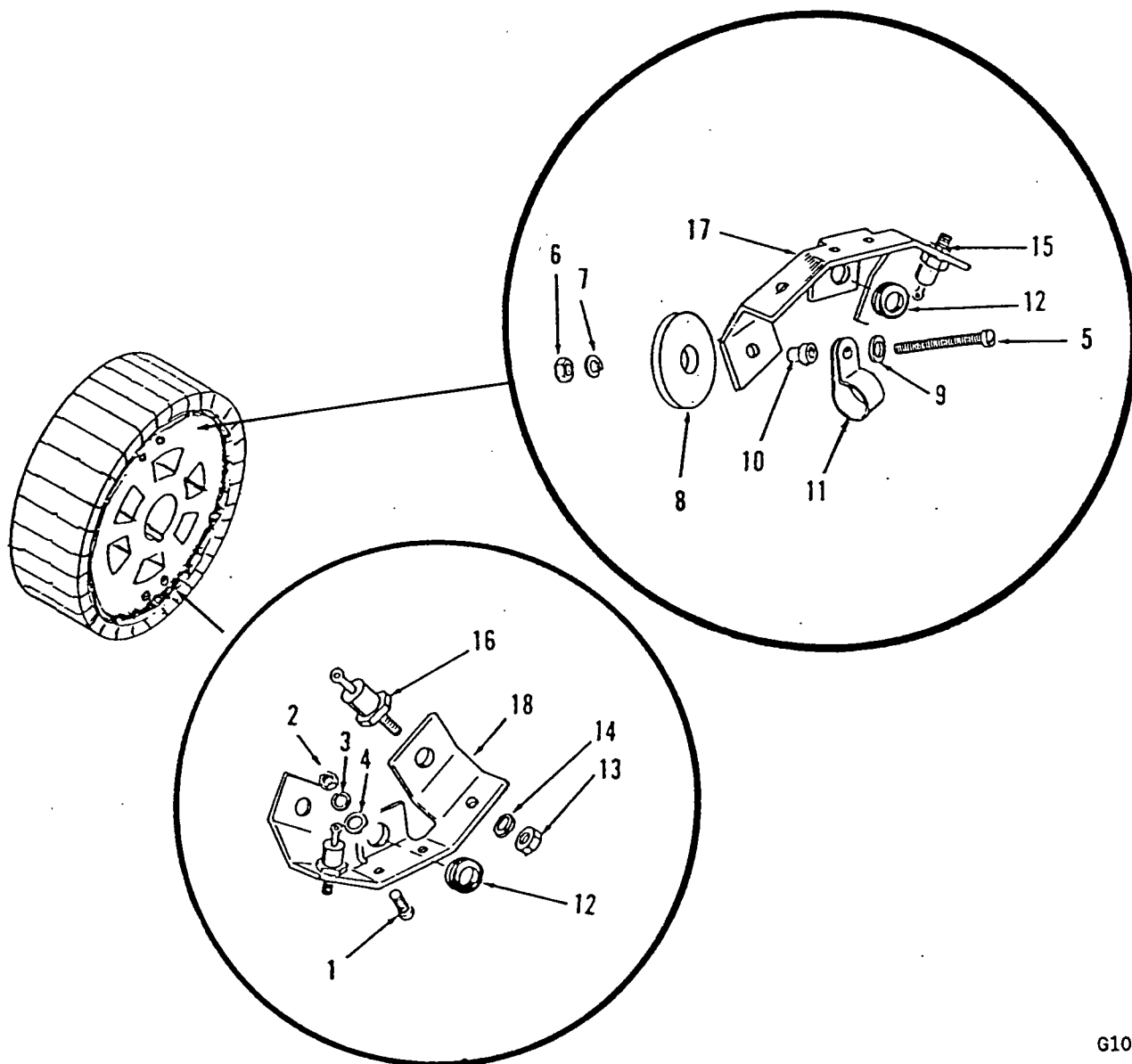


242A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")
2	850-0040	2	Washer, Lock - Spring (1/4")
3			Cap, Insulating
	150-1410	1	Standard
	150-1410	2	Dual Application
4	868-0011	4	Nut, Hex - Jam (3/4-16)
5			Sensor
	150-1406	1	Standard
	150-1406	2	Dual Application

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
6			Bracket
	150-1556	1	Standard
	150-1878	1	Dual Application
7	800-0050	1	Screw, Cap - Hex Head (3/8-16 x 1")
8	856-0010	1	Washer, Lock - EIT (3/8")
9	800-0513	1	Screw, Cap - Hex Head Modified with Tapped Hole
10	150-1557	1	Wheel - Speed Sensor

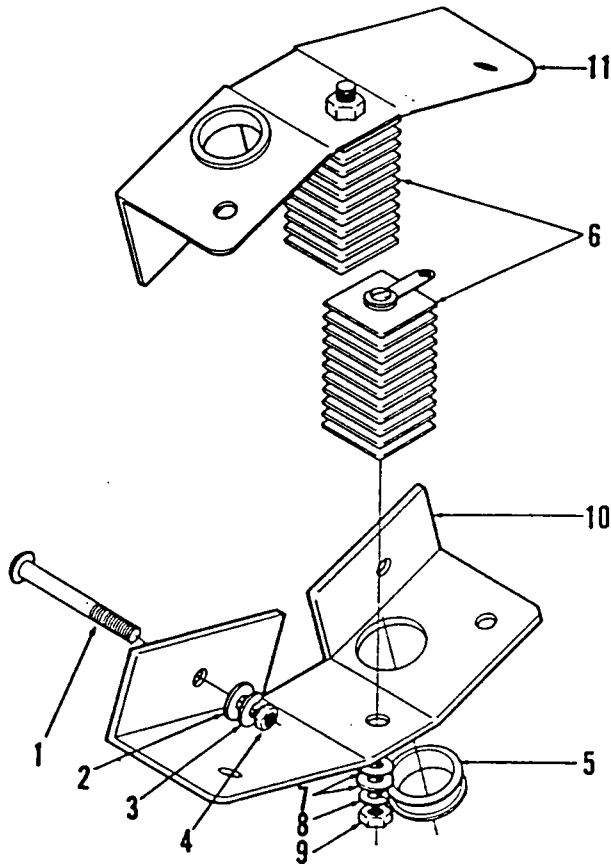
Exciter Rotor Components



G1092

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	201-1501	1	Rotor, Exciter - 60 Hz	9	526-0009	4	Washer, Flat (7/32"ID x 1/2"OD x 1/16"THK)
	201-1549	1	Rotor, Exciter - 50 Hz	10	508-0124	4	Spacer, Stepped
1	813-0100	2	Screw, Machine - Round Head (#10-32 x 1/2")	11	332-0050	2	Clamp, Loop
2	870-0053	2	Nut, Hex (#10-32)	12	508-0093	2	Grommet, Rubber
3	850-0030	2	Washer, Lock - Spring (#10)	13	868-0001	6	Nut, Hex (1/4-28)
4	526-0008	2	Washer, Flat (13/64"ID x 7/16"OD x 1/32"THK)	14	850-0040	6	Washer, Lock - Spring (1/4")
5	813-0114	4	Screw, Machine - Round Head (#10-32 x 3")	15	358-0011	3	Rectifier, Diode - Positive (CR1, CR2, CR3)
6	870-0053	4	Nut, Hex (#10-32)	16	358-0012	3	Rectifier, Diode - Negative (CR4, CR5, CR6)
7	850-0030	4	Washer, Lock - Spring (#10)	17	363-0025	1	Sink, Heat - Positive
8	508-0156	4	Washer, Insulating	18	363-0033	1	Sink, Heat - Negative

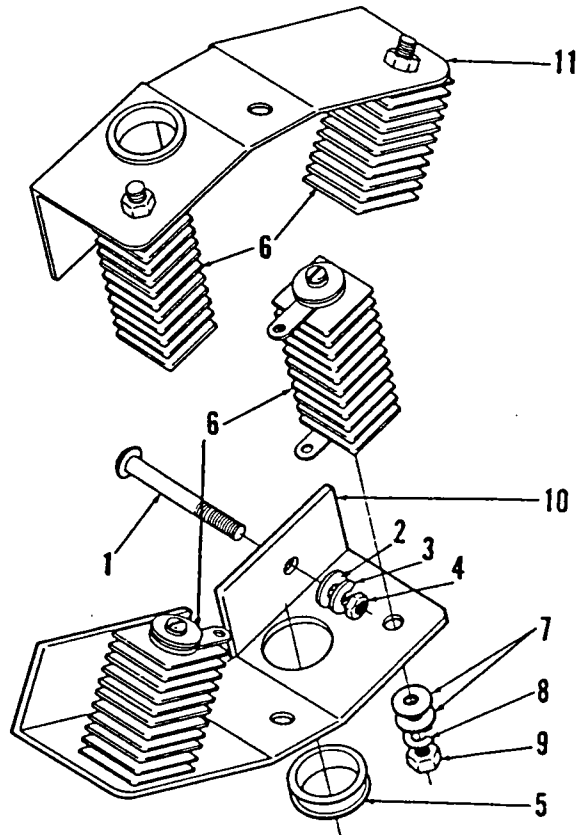
Voltage Suppressor Components



XES1229

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	232-2445	1	Suppressor, Voltage	6	305-0526	1	Set, Voltage Suppressor
1	813-0120	4	Screw, Machine - Round Head (#10-32 x 3-1/2")	7	526-0140	4	Washer, Flat (#10)
2	526-0140	4	Washer, Flat (#10)	8	850-0030	4	Washer, Lock - Spring (#10)
3	850-0030	4	Washer, Lock - Spring (#10)	9	870-0053	4	Nut, Hex (#10-32)
4	870-0053	4	Nut, Hex (#10-32)	10	363-0025	1	Sink, Heat - Positive
5	508-0093	2	Grommet	11	363-0033	1	Sink, Heat - Positive

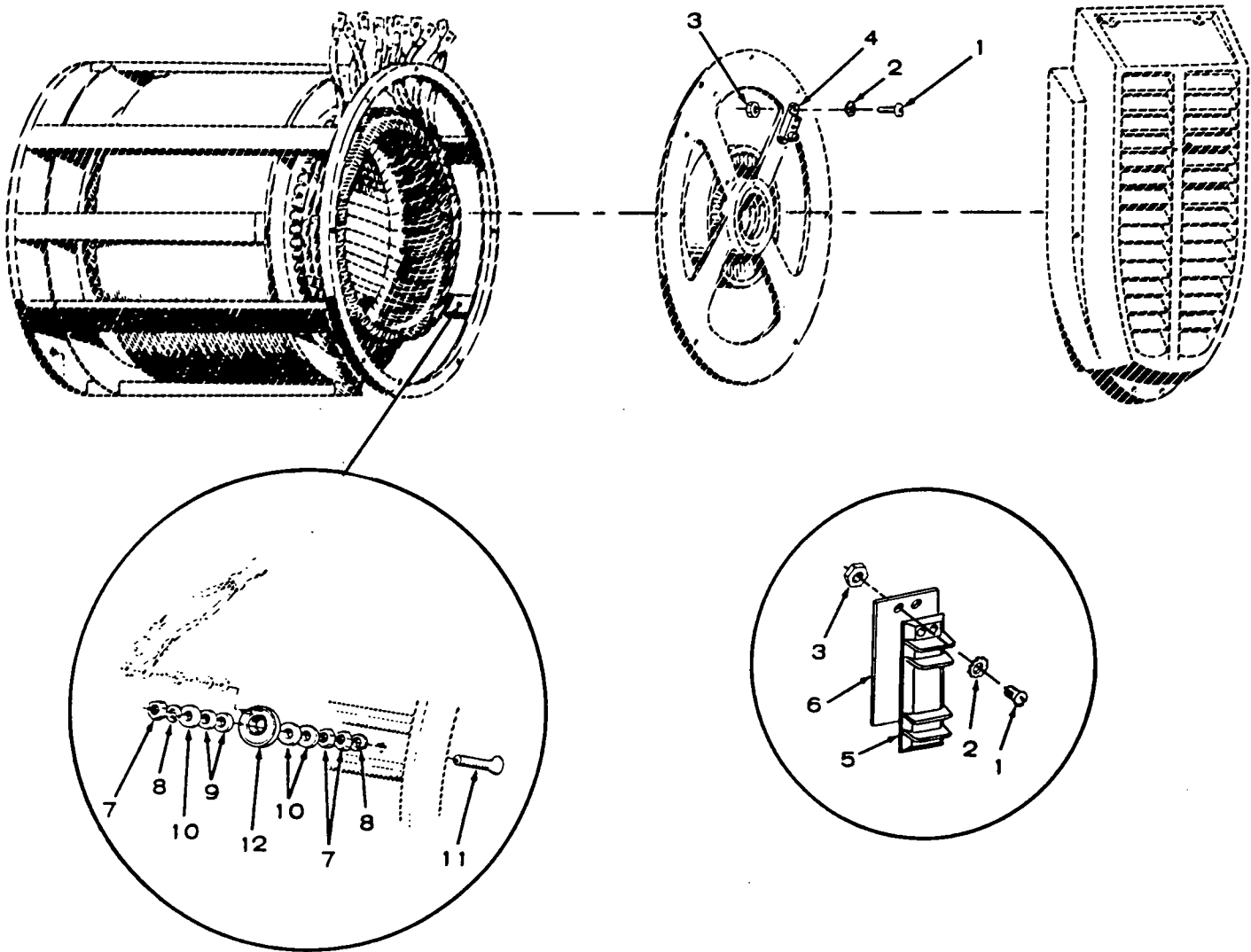
Dual Voltage Suppressor Components



XES1230

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	232-2766	1	Suppressor, Voltage - Dual	6	305-0526	2	Set, Voltage Suppressor
1	813-0120	8	Screw, Machine - Round Head (#10-32 x 3-1/2")	7	526-0140	8	Washer, Flat (#10)
2	526-0140	8	Washer, Flat (#10)	8	850-0030	8	Washer, Lock - Spring (#10)
3	850-0030	8	Washer, Lock - Spring (#10)	9	870-0053	8	Nut, Hex (#10-32)
4	870-0053	8	Nut, Hex (#10-32)	10	363-0025	1	Sink, Heat - Positive
5	508-0093	2	Grommet	11	363-0033	1	Sink, Heat - Positive

Generator Heater

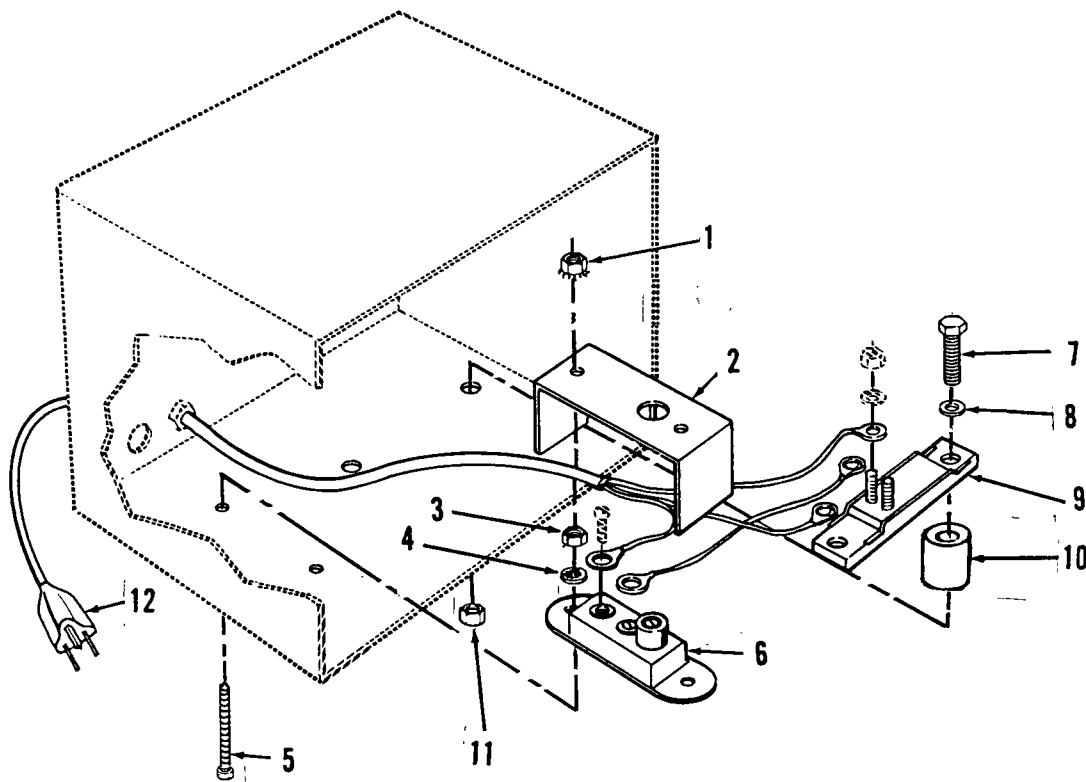


G1101

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	812-0068	4	Screw, Machine - Round Head (#6-32 x 1")
2	853-0003	4	Washer, Lock - ET (#6)
3	860-0005	4	Nut, Hex (#6-32)
4	309-0128	1	Thermostat
5	332-0333	1	Block, Terminal
6	332-0499	1	Strip, Marker
7	862-0003	6	Nut, Hex (3/8-16)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
8	850-0050	4	Washer, Lock - Spring (3/8")
9	526-0029	4	Washer, Flat (3/8")
10	526-0123	6	Washer, Flat (1-1/4"OD)
11	814-0203	2	Screw, Machine - Flat Head (3/8-16 x 2")
12	333-0059	2	Heater, Electrical (125 Watt, 120 VAC)

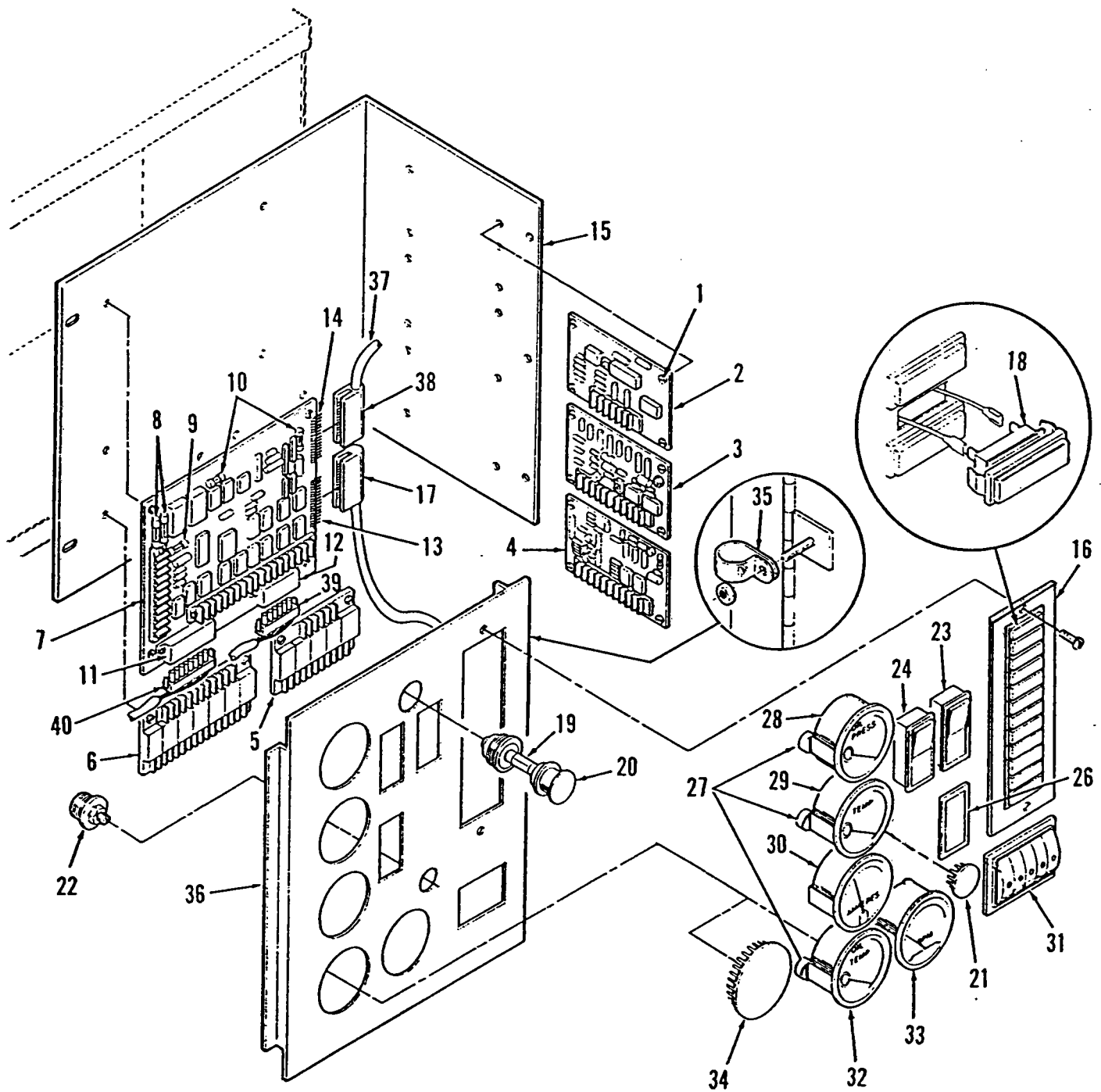
Control Heater



SC1156

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	870-0183	2	Nut, Self-locking - Hex (#6-32)	7	800-0034	2	Screw, Cap - Hex Head (5/16-18 x 2-1/4")
2	301-1886	1	Cover	8	526-0113	2	Washer, Flat (5/16")
3	860-0006	1	Nut, Hex (#6-32)	9	333-0151	1	Heater, Electrical
4	854-0006	2	Washer, Lock - IT (#6)	10	130-1107	2	Spacer
5	812-0070	2	Screw, Machine - Round Head (#6-32 x 1-1/4")	11	870-0257	2	Nut, Self-locking - Hex (5/16-18)
6	309-0128	1	Thermostat, Adjustable	12	335-0161	1	Cable, Electrical

Engine Control
Begin Spec E

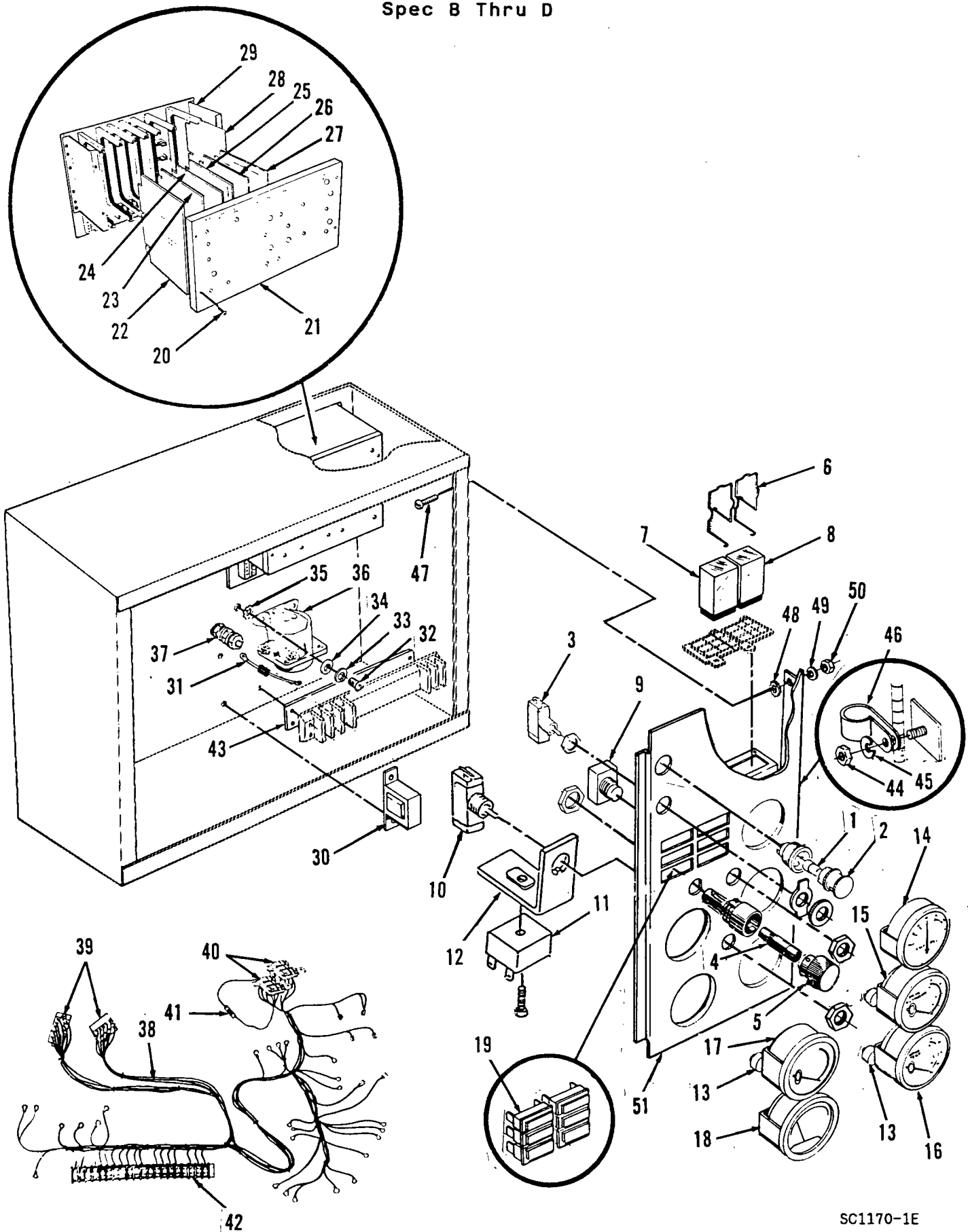


Engine Control Begin Spec E

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	815-0544	24	Screw, Machine - Round Head With IT Lock Washer (#6-32 x 1/2")	17	323-1310	1	Housing, 13 Pin (J3)
					323-1302	13	Contact, Pin
2	300-2900	1	Board, Time Delay, Start/Stop - 24 VDC (A15)	18	322-0369-02	1	Lamp, Incandescent - 1/3 Watt, 28 VDC
3			Board, Magnetic Sensor, Start Disconnect/Over Speed Sensor (A16)	19	322-0017	1	Lamp, Incandescent - 28 VDC (DS11)
	300-2903	1	Standard	20	322-0361	1	Holder, Lamp
	300-2904	1	Precision	21	517-0131	1	Plug, Button
4	300-2906	1	Board, Over-Under Voltage Sensor - 24 VDC (A17)	22	151-0402	1	Potentiometer (R11)
5	300-2856	1	Board, Relay - 24 VDC (A13)	23	308-0785	1	Switch, Push (S11)
6	300-2863	1	Board, Relay - 24 VDC (A14)	24	308-0784	1	Switch, Push (S12)
7			Board, Engine Monitor (A11) (Includes Fuses and Connectors)	26	301-6257	1	Cover
	300-2808	1	24 VDC, 2 Light	27	193-0250	3	Resistor, Gauge (R12,R13,R14)
	300-2812	1	24 VDC, 12 Light	28	193-0352	1	Gauge, Pressure - Oil (M11)
8	321-0270	2	Fuse, Cartridge - 20 Amp (F1, F2)	29	193-0351	1	Gauge, Temperature - Water (M12)
9	321-0231	1	Fuse, Cartridge - 15 Amp (F3)	30	302-1790	1	Ammeter (M13)
10	321-0094	2	Fuse, Cartridge - 5 Amp (F4, F5)	31	302-0885	1	Meter, Totalizing - Time (M14)
11	323-1305	1	Connector, 8 Pin (P1)	32	193-0330	1	Gauge, Temperature - Oil (M15)
12	323-1303	1	Connector, 6 Pin (P2)	33	302-1715	1	Tachometer (M16)
13	323-1309	1	Connector, 13 Pin (P3)	34	517-0221	1	Plug, Button
14	323-1307	1	Connector, 12 Pin (P4)	35	322-0052	1	Clamp, Loop
15	301-8851	1	Bracket, Mounting		870-0131	1	Nut, Self-locking - Hex (#10-32)
	821-0004	4	Screw, Self-locking - Hex (#10-32 x 5/16")	36			Door, Control
16			Module, Indicator - Fault (A12) (Includes Connector)		301-9055-01	1	5 Meter Holes
	322-0358-02	1	24 VDC, 2 Light		301-9055-02	1	3 Meter Holes
	322-0360-02	1	24 VDC, 12 Light	37	338-1817	1	Harness, Wiring - DC (Includes Connector)
	815-0385	2	Screw, Machine - Round Head (#6-32 x 1/2")	38	323-1308	1	Housing, 12 Pin (J4)
	870-0183	2	Nut, Self-locking - Hex (#6-32)		323-1302	12	Contact, Pin
				39	323-1304	1	*Housing, 6 Pin
					323-1200	6	*Contact, Pin
				40	323-1306	1	*Housing, 8 Pin
					323-1200	8	*Contact, Pin

* - Parts Included in Engine Wiring Harness

Engine Control
Spec B Thru D



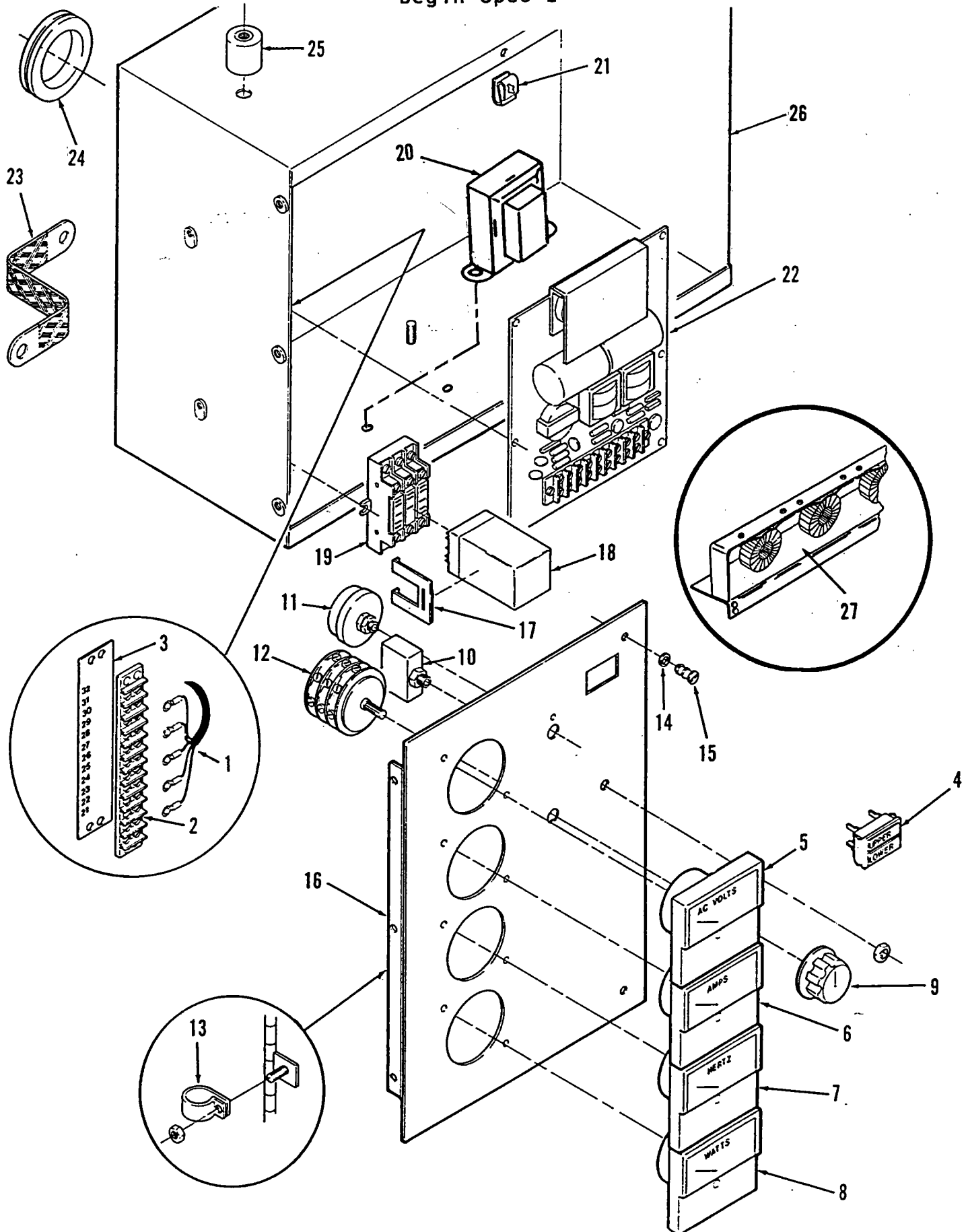
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Engine Control Spec B Thru D

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	322-0017	1	Lamp, 24 VDC (DS18)	30	315-0361	1	Transformer, Step-down
2	322-0149	1	Light, Panel		812-0061	2	Screw, Machine - Round Head (#6-32 x 3/8")
3	308-0002	1	Switch, Toggle (S16)		853-0003	2	Washer, Lock - EIT (#6)
4	321-0147	1	Fuse (F1)	31	357-0018	1	Diode with Terminals
5	321-0217	1	Fuseholder	32	813-0098	2	Screw, Machine - Round Head (#10-32 x 3/8")
6	307-1157	2	Spring, Holddown - Relay	33	850-0030	2	Washer, Lock - Spring (#10)
7	307-1061	1	Relay, Start Protection (K14)	34	526-0009	2	Washer, Flat (#10)
8	307-1056	1	Relay, Ignition (K12)	35	856-0003	2	Washer, Lock - EIT (#10)
9	308-0140	1	Switch, Push (S15)	36	307-0061	1	Relay, Starting - 24 VDC (K13)
10			Switch, Toggle - Selector (S15)	37			Terminal, Ground (Includes Parts Marked *)
	308-0220	1	Standard		871-0010	2	*Nut, Hex (#10-32)
	308-0347	1	Penn State		850-0030	1	*Washer, Lock - Spring (#10)
	308-0539	1	Alarm Control		526-0062	2	*Washer, Flat (#10)
11	333-0194-02	1	Flasher, 24 VDC		853-0008	1	*Washer, Lock - ET (#10)
	813-0105	1	Screw, Machine - Round Head (#10-32 x 1")		856-0003	1	*Washer, Lock - EIT (#10)
12	301-6053	1	Bracket, Mounting - Flasher		815-0203	1	*Screw, Machine - Round Head (#10-32 x 7/8")
13	193-0250	3	Resistor, Gauge (R11,R12,R13)	38	338-1016	1	Harness, Wiring
14	302-0061	1	Ammeter (M11)		812-0061	4	Screw, Machine - Round Head (#6-32 x 3/8")
15	193-0243	1	Gauge, Pressure - Oil, 12 VDC (M12)		812-0066	2	Screw, Machine - Round Head (#6-32 x 3/4")
16	193-0245	1	Gauge, Temperature - Water - 12 VDC (M13)		853-0003	6	Washer, Lock - Spring (#6)
17	193-0248	1	Gauge, Temperature - Oil - 12 VDC (M15)		860-0006	4	Nut, Hex (#6-32)
18	302-0749	1	Tachometer (M14)	39	323-0984	2	Housing, Connector - Less Terminal
19			Light, Indicator - 28 VDC		323-0488	24	Terminal
	322-0119	1	Overcrank (DS12)	40	323-0765	2	Socket, Relay (Less Terminals)
	322-0120	1	Low Oil Pressure (DS14)		332-1280	11	Terminal
	322-0121	1	High Engine Temperature (DS15)	41	357-0004	1	Diode (CR11)
	322-0122	1	Low Engine Temperature (DS16)	42	332-1005	1	Block, Terminal
	322-0123	1	Overspeed (DS13)	43	332-1559	1	Strip, Marker
	322-0129	1	Fault (DS12)	44	870-0053	1	Nut, Hex (#10-32)
	322-0315	1	Switch Off (DS17)	45	850-0030	1	Washer, Lock - Spring (#10)
20	815-0387	4	Screw, Machine - Pan Head (#6-32 x 1/4")	46	332-0052	1	Clamp, Loop
21	301-4015	1	Cover	47	815-0026	3	Screw, Machine - Truss Head (#10-32 x 3/8")
22	300-1573	1	Board, Cyle Cranker	48	856-0003	3	Washer, Lock - ET (#10)
23	300-1574	1	Board, Start Disconnet	49	850-0030	3	Washer, Lock - Spring (#10)
24	300-1575	1	Board, Overspeed Sensor	50	870-0053	3	Nut, Hex (#10-32)
25	300-1576	1	Board, Engine Monitor No.1	51			Panel, Control
26	300-1577	1	Board, Engine Monitor No.2		301-4086	1	3 Meters, 1 Panel Light
27	300-1578	1	Board, Engine Shutdown		301-4223	1	4 Meters, 1 Panel Light
28	300-1579	1	Board, Time Delay-StartStop		301-3997	1	5 Meters, 1 Panel Light
29	300-1572	1	Chassis				

* - Parts Included in Ground Terminal.

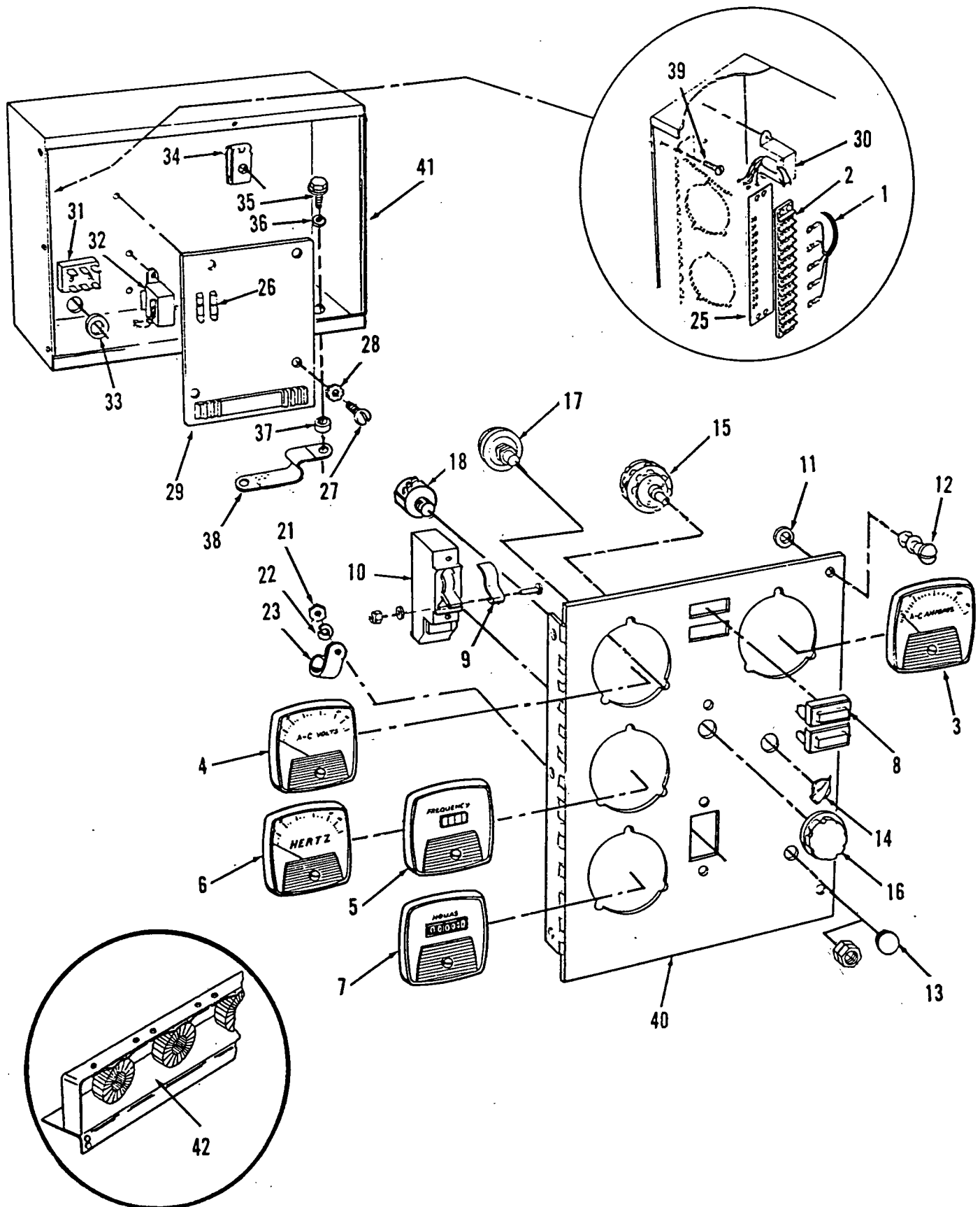
Generator Control Begin Spec E



Generator Control Begin Spec E

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Harness, Wiring - (Includes Terminal Block)	16			Door, Control
	338-1818	1	Control with Meters		301-9054-01	1	4 Meter Holes
	338-1853	1	Control without Meters		301-9054-02	1	3 Meter Holes
	812-0065	2	Screw, Machine - Round Head (#6-32 x 5/8")		301-9054-03	1	No Meter Holes
2	332-0607	1	Block, Terminal (TB1)		821-0004	3	Screw, Self-locking - Hex (#10-32 x 5/16")
3	332-2723	1	Strip, Marker	17	307-1987	2	Clip, Relay
4	322-0363	1	Light, Indicator - Dual (DS21, DS22)	18	307-1056	1	Relay, 24 VDC (K21)
5	302-1148	1	Voltmeter (M21) 0-300/600 VAC	19	323-0804	1	Socket, Relay
6			Ammeter (M22)		815-0544	2	Screw, Machine - Round Head with IT Lock Washer (#6-32 x 1/2")
	302-1798	1	0-1000/2000 Amp Code 4, 4X - 450 and 500 kW; Code 520 - 385 and 450 kW	20	315-0642	1	Transformer, Step-down
	302-1799	1	0-1500/3000 Amp Code 4X 600 kW; 21 Code 520 550 kW		812-0077	2	Screw, Machine - Round Head (#8-32 x 3/8")
7	302-1720	1	Meter, Frequency (M23)		856-0002	2	Washer, Lock - EIT (#8)
8		1	Wattmeter (M24) (See Separate page for Components)		406-0332	2	Receptacle, Fastener
9	303-0032	1	Knob	22	300-2977	1	Regulator, Voltage (VR21)
10			Breaker, Circuit (CB21)		815-0544	6	Screw, Machine - Round Head with IT Lock Washer (#6-32 x 1/2")
	320-1121	1	Standard	23	337-0049	1	Strap, Electrical
	320-1438	1	With Aux Contact		800-0024	1	Screw, Cap - Hex Head (5/16-18 x 1/2")
11	303-0261	1	Rheostat (R21)		856-0008	1	Washer, Lock - EIT (5/16")
12	308-0284	1	Switch, Rotary (S21)	24	508-0051	1	Grommet
13	332-0052	1	Clamp, Loop	25	402-0527	2	Mount, Vibration
	870-0131	1	Nut, Self-locking - Hex with ET Lock Washer (#10-32)		800-0045	4	Screw, Cap - Hex Head (5/16-18 x 3/8")
14	406-0334	2	Clip, Fastener		850-0045	4	Washer, Lock - Spring (5/16")
15	406-0333	2	Stud, Fastener	26	301-8065	1	Box, Control
				27		1	Current Transformer (See Separate Page for Components)

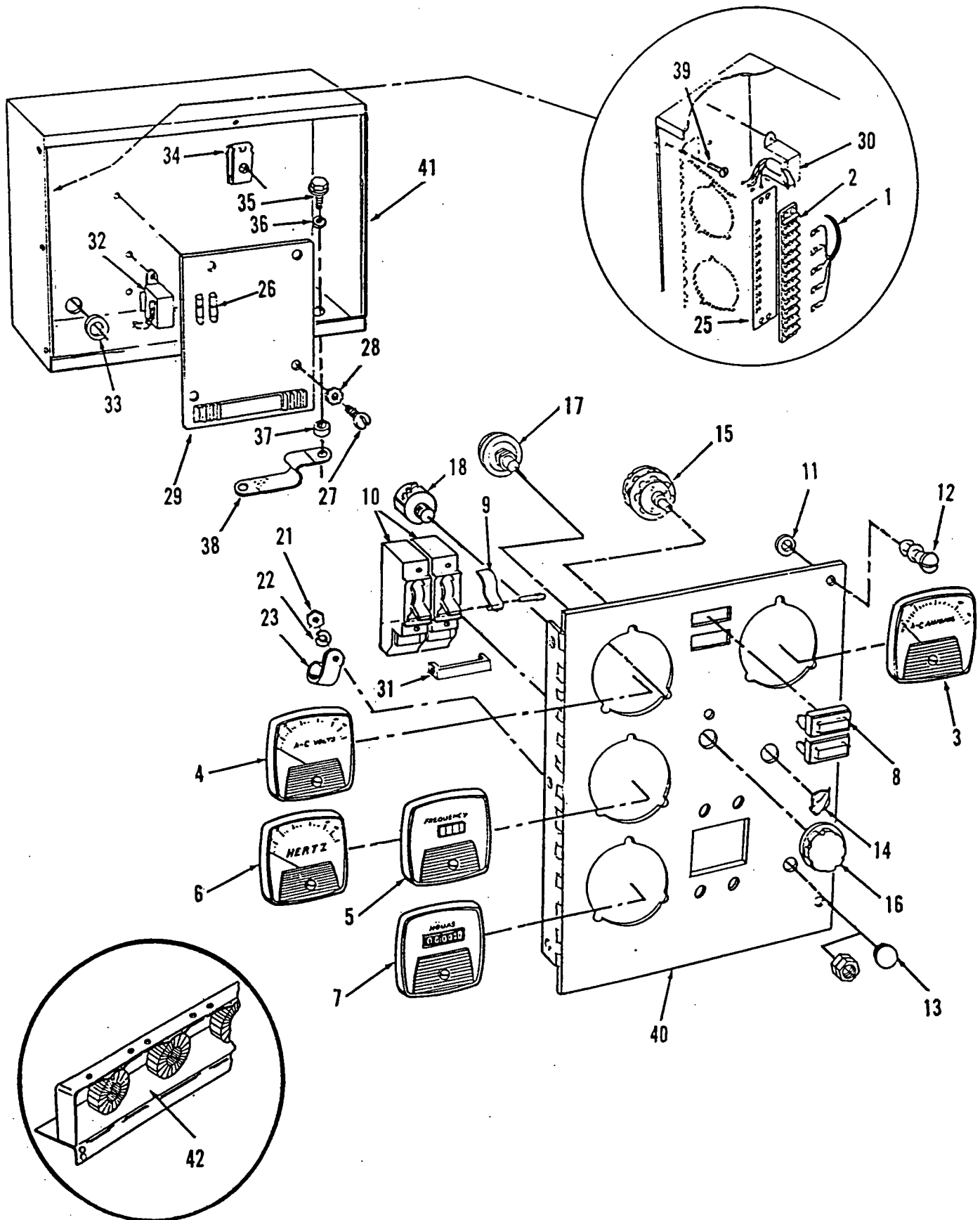
Generator Control Spec B thru D



Generator Control Spec B thru D

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	338-0759	1	Harness, Wiring	11	406-0334	2	Clip, Fastener
	338-0916	1	Code 4,5,6,8,54,58,519,521	12	406-0333	2	Stud, Fastener
2			Code 4X,7,7X,9X,57,520,522, and 523	13	517-0131	1	Plug, Plastic
	332-0607	1	Block, Terminal (TB21)	14	303-0076	1	Knob, Pointer
	332-0795	1	12 Place	15	308-0284	1	Switch, Selector (S21)
	812-0066	2	16 Place	16	303-0032	1	Knob
	853-0003	2	Screw, Machine - Round Head (#6-32 x 3/4")	17	303-0170	1	Rheostat (R21)
	850-0020	2	Washer, Lock - ET (#6)	18	151-0402	1	Potentiometer- 5k Ohm
3			Washer, Lock - Spring (#6)	21	870-0053	1	Nut, Hex (#10-32)
	302-0414	1	Ammeter (M21)	22	850-0030	1	Washer, Lock - Spring (#10)
	302-0415	1	0-500 Amp Code 522 (385kW)	23	332-0051	1	Clamp, Loop
			0-750 Amp Code 4X,7X,9X(450kW); Code 522,523(450kW); Code 9X (500kW)	25			Strip, Marker
	302-0416	1	0-1000 Amp Code 7 (450kW); Code 4X,6D,7X (500kW); Code 522 (550kW); Code 4X,7X, 9X (600kW)		332-1242	1	16 Place
					332-1248	1	12 Place
	302-0640	1	0-1200 Amp Code 7 (500kW); Code 6D (600kW)	26	321-0204	2	Fuse, Cartridge - 1/4 Amp
	302-0641	1	0-1500 Amp Code 519, 520, 521- (385kW); Code 5D (450kW); Code 7 (600kW)	27	812-0065	4	Screw, Machine - Round Head (#6-32 x 5/8")
	302-0642	1	0-2000 Amp Code 54,58 (385kW); Code 4,8 (450kW); Code 54,58, 519,520,521 (450kW); Code 4, 5D,8 (500kW); Code 520 (550kW); Code 5D (600kW)	28	853-0003	4	Washer, Lock - ET (#6)
				29			Regulator, Voltage (VR21)
	302-1044	1	0-2500 Amp Code 54,58 (550kW); Code 4,8 (600kW)		332-1704	1	120 VAC Input Signal Req'd
	302-1208	1	0-1000/2000 Amp Code 31 (450 and 500kW)		332-2029	1	240 VAC Input Signal Req'd (Semi-Frequency Sensitive)
	302-1209	1	0-1200/2400 Amp Code 31 (600kW)		332-2030	1	240 VAC Input Signal Req'd (Voltage Sensitive Type)
4			Voltmeter (M22)		332-2031	1	240 VAC Input Signal Req'd (Frequency Sensitive Type)
	302-0421	1	0-300 VAC Code 4,5D,9X,54,58,519	30			Transformer, Voltage (T21)
	302-0612	1	0-500 VAC Code 6D,7,7X,520,522, and 523		315-0342	1	120 VAC
	302-1072	1	0-600 VAC Code 4X		315-0431	1	240 VAC
	302-0718	1	0-300/600 VAC Code 31		812-0061	2	Screw, Machine - Round Head (#6-32 x 3/8")
5			Meter, Frequency - Reed (M23)		853-0003	2	Washer, Lock - ET (#6)
	302-0221	1	230 VAC, 60 Hz	33	508-0001	1	Rectifier, Bridge (CR21)
	302-0256	1	230 VAC, 50 Hz	34	406-0332	2	Screw, Machine - Round Head (#6-32 x 1-1/4")
6			Meter, Frequency - Pointer (M23)	35	800-0045	4	Washer, Lock - Spring (#6)
	302-0810	1	208 VAC, 60 Hz	36	850-0045	4	Reactor (L21)
	302-0811	1	240 VAC, 60 Hz	37	402-0078	4	Screw, Machine - Round Head (#6-32 x 3/8")
	302-0894	1	240 VAC, 50 Hz	38	337-0049	1	Washer, Lock - ET (#6)
7			Meter, Totalizing - Time (M24)	39	815-0026	3	Grommet
	302-0466	1	60 Hz				Receptacle, Fastener
	302-0469	1	50 Hz	40			Screw, Cap - Hex Head (5/16-18 x 3/8")
8			Light, Indicator - Red - 125 VAC		301-3342	1	Washer, Lock - Spring (5/16")
	322-0130	1	Upper Scale (DS21)		301-3170	1	Dampener, Vibration
	322-0131	1	Lower Scale (DS22)		301-3449	1	Strap, Electrical - Ground
9	320-0307	1	Lock, Handle		301-3312	1	Screw, Machine - Truss Head (#10-32 x 3/8")
	815-0203	1	Screw, Machine - Round Head (#10-32 x 7/8")	41	301-4135	1	Panel, Control
				42			4 Meters, No Ind Light Hole
	854-0010	1	Washer, Lock - ET (#10)				4 Meters
	871-0010	1	Nut, Hex (#10-32)				5 Meters, No Ind Light Hole
10	320-0455	1	Breaker, Circuit (CB21)				5 Meters
	812-0061	2	Screw, Machine - Round Head (#6-32 x 3/8")				Box, Control
	850-0020	2	Washer, Lock - Spring (#6)				Current Transformer (See Separate Page for Components)

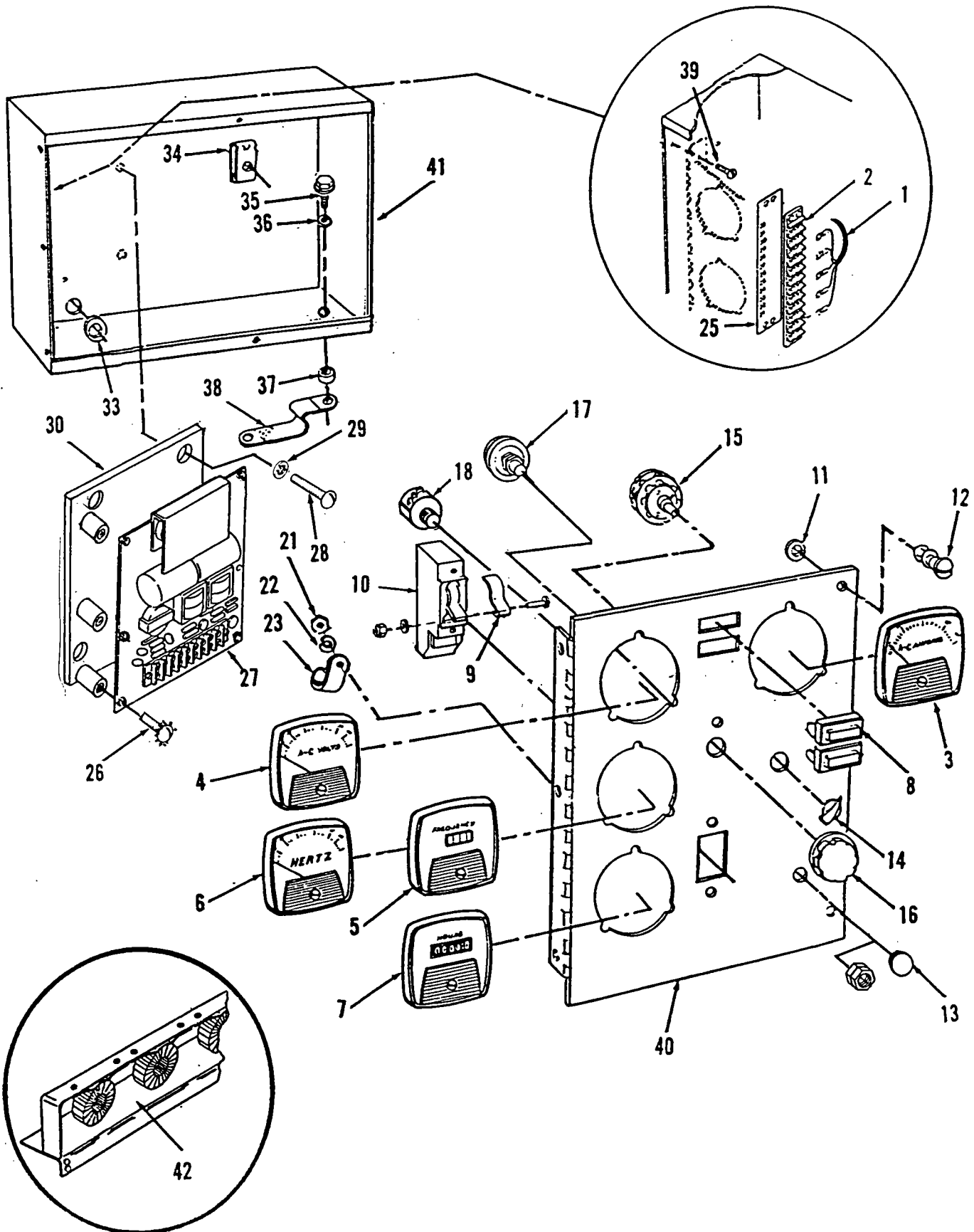
Generator Control Switching Regulator Spec B thru D



**Generator Control
Switching Regulator
Spec B thru D**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	338-0759	1	Harness, Wiring	9	320-0307	1	Lock, Handle
	338-0916	1	Code 4,5,6,8,54,58,519,521	10	320-0455	2	Breaker, Circuit (CB21)
			Code 4X,7,7X,9X,57,520,522, and 523		812-0061	4	Screw, Machine - Round Head (#6-32 x 3/8")
2			Block, Terminal (TB21)		850-0020	2	Washer, Lock - Spring (#6)
	332-0607	1	12 Place	11	406-0334	2	Clip, Fastener
	332-0795	1	16 Place	12	406-0333	2	Stud, Fastener
	812-0066	2	Screw, Machine - Round Head (#6-32 x 3/4")	13	517-0131	1	Plug, Plastic
	853-0003	2	Washer, Lock - ET (#6)	14	303-0076	1	Knob, Pointer
	850-0020	2	Washer, Lock - Spring (#6)	15	308-0284	1	Switch, Selector (S21)
3			Ammeter (M21)	16	303-0032	1	Knob
	302-0414	1	0-500 Amp Code 522 (385kW)	17	303-0170	1	Rheostat (R21)
	302-0415	1	0-750 Amp Code 4X,7X,9X(450kW); Code 522,523(450kW); Code 9X (500kW)	18	151-0402	1	Potentiometer - 5k Ohm
			0-1000 Amp Code 7 (450kW); Code 4X,6D,7X (500kW); Code 522 (550kW); Code 4X,7X,9X (600kW)	21	870-0053	1	Nut, Hex (#10-32)
	302-0416	1	0-1200 Amp Code 7 (500kW); Code 6D (600kW)	22	850-0030	1	Washer, Lock - Spring (#10)
	302-0640	1	0-1500 Amp Code 519, 520, 521- (385kW); Code 5D (450kW); Code 7 (600kW)	23	332-0051	1	Clamp, Loop
	302-0641	1	0-2000 Amp Code 54,58 (385kW); Code 4,8 (450kW); Code 54,58, 519,520,521 (450kW); Code 4, 5D,8 (500kW); Code 520 (550kW); Code 5D (600kW)	25			Strip, Marker
	302-0642	1	0-2500 Amp Code 54,58 (550kW); Code 4,8 (600kW)		332-1242	1	16 Place
	302-1044	1	0-1000/2000 Amp Code 31 (450 and 500kW)		332-1248	1	12 Place
	302-1208	1	0-1200/2400 Amp Code 31 (600kW)	27	812-0065	4	Screw, Machine - Round Head (#6-32 x 5/8")
	302-1209	1	Voltmeter (M22)	28	853-0003	4	Washer, Lock - ET (#6)
4	302-0421	1	0-300 VAC Code 4,5D,9X,54,58,519	29	332-1930	1	Regulator, Voltage (VR21)
	302-0612	1	0-500 VAC Code 6D,7,7X,520,522, and 523	30	315-0431	1	Transformer, Voltage (T21) 240 VAC
	302-1072	1	0-600 VAC Code 4X		812-0061	2	Screw, Machine - Round Head (#6-32 x 3/8")
	302-0718	1	0-300/600 VAC Code 31		853-0003	2	Washer, Lock - ET (#6)
5			Meter, Frequency - Reed (M23)	31	320-0202	1	Bar, Locking - with Thru Pin
	302-0221	1	230 VAC, 60 Hz	32	315-0384	1	Reactor (L21)
	302-0256	1	230 VAC, 50 Hz		812-0061	2	Screw, Machine - Round Head (#6-32 x 3/8")
6			Meter, Frequency - Pointer (M23)		853-0003	2	Washer, Lock - ET (#6)
	302-0810	1	208 VAC, 60 Hz	33	508-0001	1	Grommet
	302-0811	1	240 VAC, 60 Hz	34	406-0332	2	Receptacle, Fastener
	302-0894	1	240 VAC, 50 Hz	35	800-0045	4	Screw, Cap - Hex Head (5/16-18 x 3/8")
7			Meter, Totalizing - Time (M24)	36	850-0045	4	Washer, Lock - Spring (5/16")
	302-0466	1	60 Hz	37	402-0078	4	Dampener, Vibration
	302-0469	1	50 Hz	38	337-0049	1	Strap, Electrical - Ground
8			Light, Indicator - Red - 125 VAC	39	815-0026	3	Screw, Machine - Truss Head (#10-32 x 3/8")
	322-0130	1	Upper Scale (DS21)	40			Panel, Control
	322-0131	1	Lower Scale (DS22)		301-6412	1	4 Meters, No Ind Light Hole
					301-6298	1	4 Meters
					301-7088	1	5 Meters, No Ind Light Hole
					301-8775	1	5 Meters
				41	301-4135	1	Box, Control
				42			Current Transformer (See Separate Page for Components)

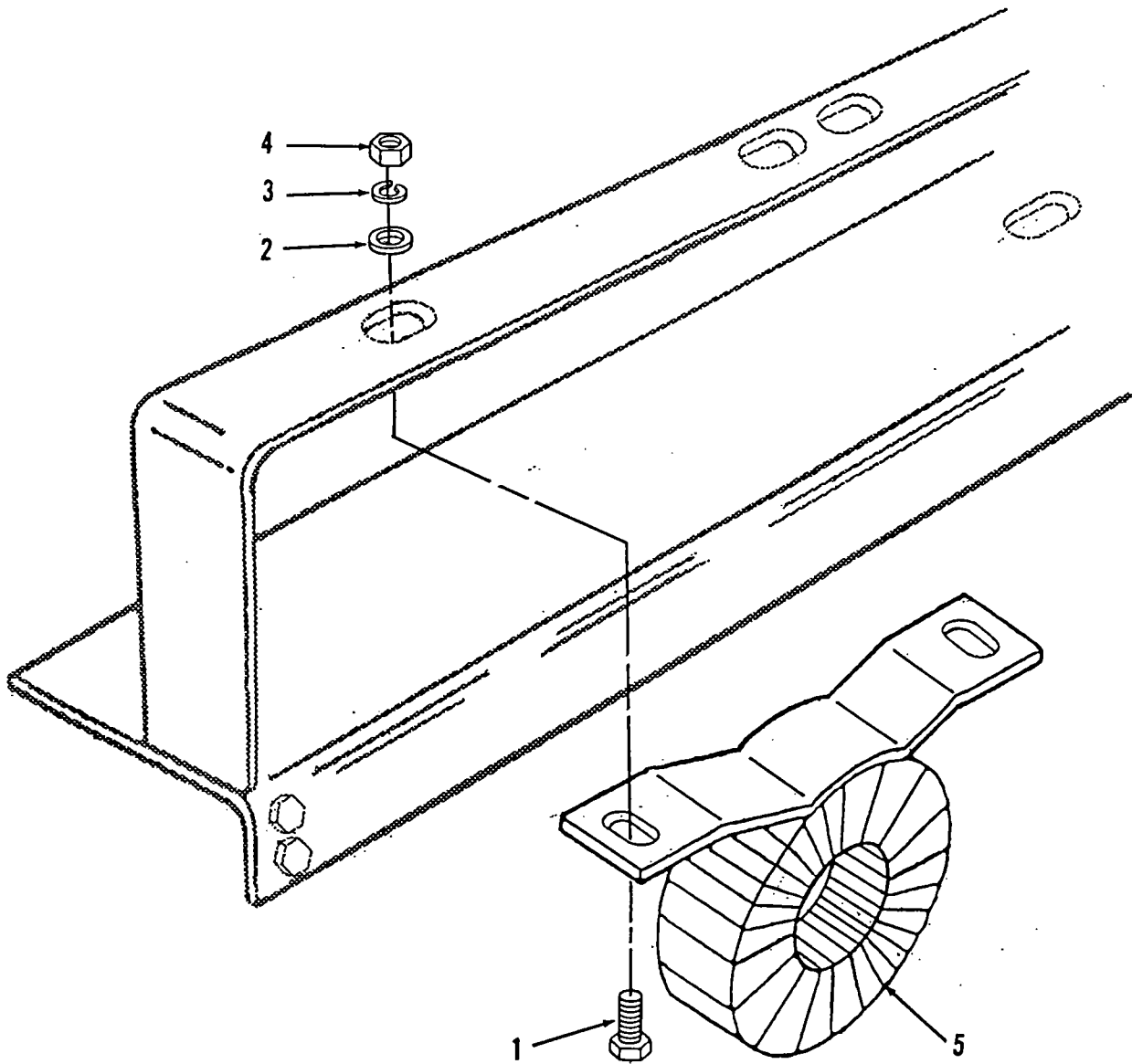
Generator Control
Torque Matched Regulator
Spec B thru D



**Generator Control
Torque Matched Regulator
Spec B thru D**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Harness, Wiring	8			Light, Indicator - Red - 125 VAC
	338-0759	1	Code 4,5,6,8,54,58,519,521		322-0130	1	Upper Scale (DS21)
	338-0916	1	Code 4X,7,7X,9X,57,520,522, and 523		322-0131	1	Lower Scale (DS22)
2			Block, Terminal (TB21)	9	320-0307	1	Lock, Handle
	332-0607	1	12 Place		815-0203	1	Screw, Machine - Round Head (#10-32 x 7/8")
	332-0795	1	16 Place		854-0010	1	Washer, Lock - ET (#10)
	812-0066	2	Screw, Machine - Round Head (#6-32 x 3/4")		871-0010	1	Nut, Hex (#10-32)
	853-0003	2	Washer, Lock - ET (#6)	10	320-0455	1	Breaker, Circuit (CB21)
	850-0020	2	Washer, Lock - Spring (#6)		812-0061	2	Screw, Machine - Round Head (#6-32 x 3/8")
3			Ammeter (M21)		850-0020	2	Washer, Lock - Spring (#6)
	302-0414	1	0-500 Amp Code 522 (385kW)	11	406-0334	2	Clip, Fastener
	302-0415	1	0-750 Amp Code 4X,7X,9X(450kW); Code 522,523(450kW); Code 9X (500kW)	12	406-0333	2	Stud, Fastener
	302-0416	1	0-1000 Amp Code 7 (450kW); Code 4X,6D,7X (500kW); Code 522 (550kW); Code 4X,7X, 9X (600kW)	13	517-0131	1	Plug, Plastic
	302-0640	1	0-1200 Amp Code 7 (500kW); Code 6D (600kW)	14	303-0076	1	Knob, Pointer
	302-0641	1	0-1500 Amp Code 519, 520, 521- (385kW); Code 5D (450kW); Code 7 (600kW)	15	308-0284	1	Switch, Selector (S21)
	302-0642	1	0-2000 Amp Code 54,58 (385kW); Code 4,8 (450kW); Code 54,58, 519,520,521 (450kW); Code 4, 5D,8 (500kW); Code 520 (550kW); Code 5D (600kW)	16	303-0032	1	Knob
	302-1044	1	0-2500 Amp Code 54,58 (550kW); Code 4,8 (600kW)	17	303-0170	1	Rheostat (R21)
	302-1208	1	0-1000/2000 Amp Code 31 (450 and 500kW)	18	151-0402	1	Potentiometer- 5k Ohm
	302-1209	1	0-1200/2400 Amp Code 31 (600kW)	21	870-0053	1	Nut, Hex (#10-32)
4			Voltmeter (M22)	22	850-0030	1	Washer, Lock - Spring (#10)
	302-0421	1	0-300 VAC Code 4,5D,9X,54,58,519	23	332-0051	1	Clamp, Loop
	302-0612	1	0-500 VAC Code 6D,7,7X,520,522, and 523	25	332-1242	1	Strip, Marker
	302-1072	1	0-600 VAC Code 4X		332-1248	1	16 Place
	302-0718	1	0-300/600 VAC Code 31	26	815-0544	6	12 Place
5			Meter, Frequency - Reed (M23)				Screw, Machine - Round Head with IT Lock Washer (#6-32 x 1/2")
	302-0221	1	230 VAC, 60 Hz	27	300-2977	1	Regulator, Voltage (VR21)
	302-0256	1	230 VAC, 50 Hz	28	812-0065	4	Screw, Machine - Round Head (#6-32 x 5/8")
6			Meter, Frequency - Pointer (M23)	29	853-0003	4	Washer, Lock - ET (#6)
	302-0810	1	208 VAC, 60 Hz	30	301-9315	1	Bracket, Mounting
	302-0811	1	240 VAC, 60 Hz	33	508-0001	1	Grommet
	302-0894	1	240 VAC, 50 Hz	34	406-0332	2	Receptacle, Fastener
7			Meter, Totalizing - Time (M24)	35	800-0045	4	Screw, Cap - Hex Head (5/16-18 x 3/8")
	302-0466	1	60 Hz	36	850-0045	4	Washer, Lock - Spring (5/16")
	302-0469	1	50 Hz	37	402-0078	4	Dampener, Vibration
				38	337-0049	1	Strap, Electrical - Ground
				39	815-0026	3	Screw, Machine - Truss Head (#10-32 x 3/8")
				40			Panel, Control
					301-3342	1	4 Meters, No Ind Light Hole
					301-3170	1	4 Meters
					301-3449	1	5 Meters, No Ind Light Hole
					301-3312	1	5 Meters
				41	301-4135	1	Box, Control
				42			Current Transformer (See Separate Page for Components)

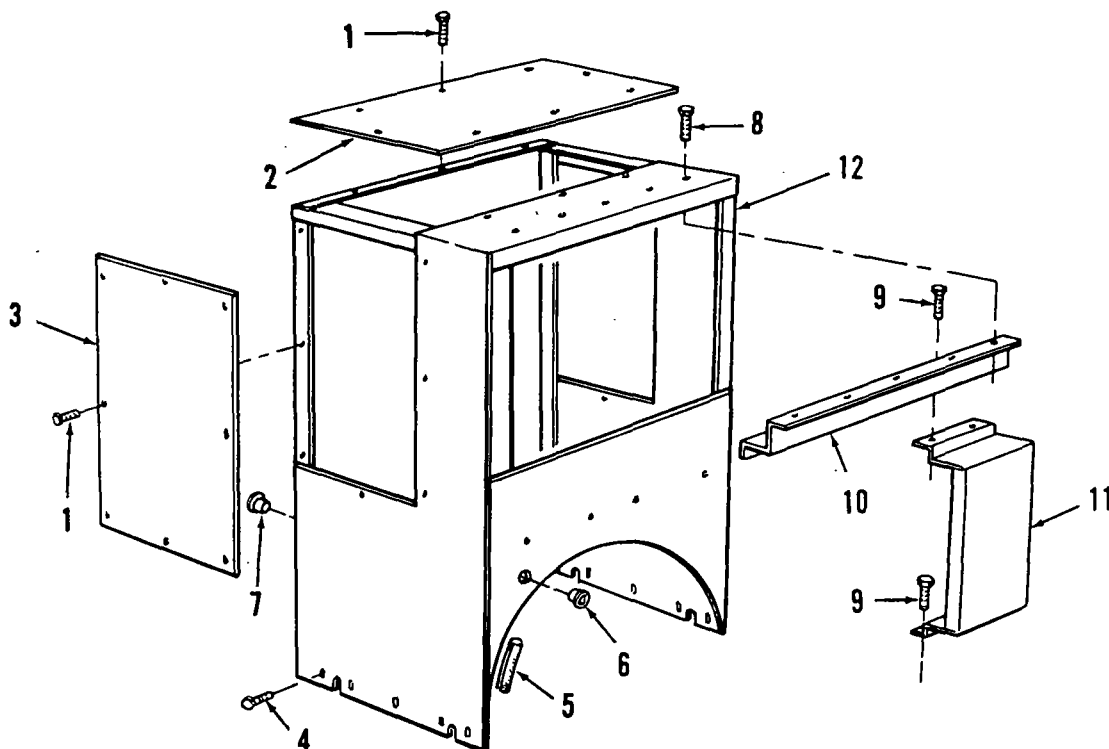
Current Transformer



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0052	6	Screw, Cap - Hex Head (3/8-16 1-1/2")
2	526-0029	6	Washer, Flat (3/8")
3	850-0050	6	Washer, Lock - Spring (3/8")
4	862-0003	6	Nut, Hex (3/8-16)
5			Transformer, Current
			450kW 60Hz, 390kW 50Hz Sets
	302-0625	3	750/5 Ratio Code 9X,54X, and 4X Spec B thru D
	302-0589	3	1000/5 Ratio Code 6D,7,7X, 31,56D,520,522,523 and 4X Begin Spec E
	302-0644	3	1500/5 Ratio Code 5D
	302-0645	3	2000/5 Ratio Code 4,8,54, 58,519,521

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			500kW 60Hz, 450kW 50Hz Sets
	302-0625	3	750/5 Ratio Code 9X
	302-0589	3	1000/5 Ratio Code 4X,6D,7X, 31,56D,522,520 Begin Spec E
	302-0643	3	1200/5 Ratio Code 7,523, 520 Spec B thru D
	302-0645	3	2000/5 Ratio Code 4,5D,8, 54,58,519,521
			600kW 60Hz, 550kW 50Hz Sets
	302-0589	3	1000/5 Ratio Code 9X,54X, and 4X Spec B thru D
	302-0643	3	1200/5 Ratio Code 6D,7X,31, 56D,522
	302-0644	3	1500/5 Ratio Code 7,520, 522,523 and 4X Begin Spec E
	302-0645	3	2000/5 Ratio Code 5D
	302-1073	3	2500/5 Ratio Code 4,8,54,58, 519,521

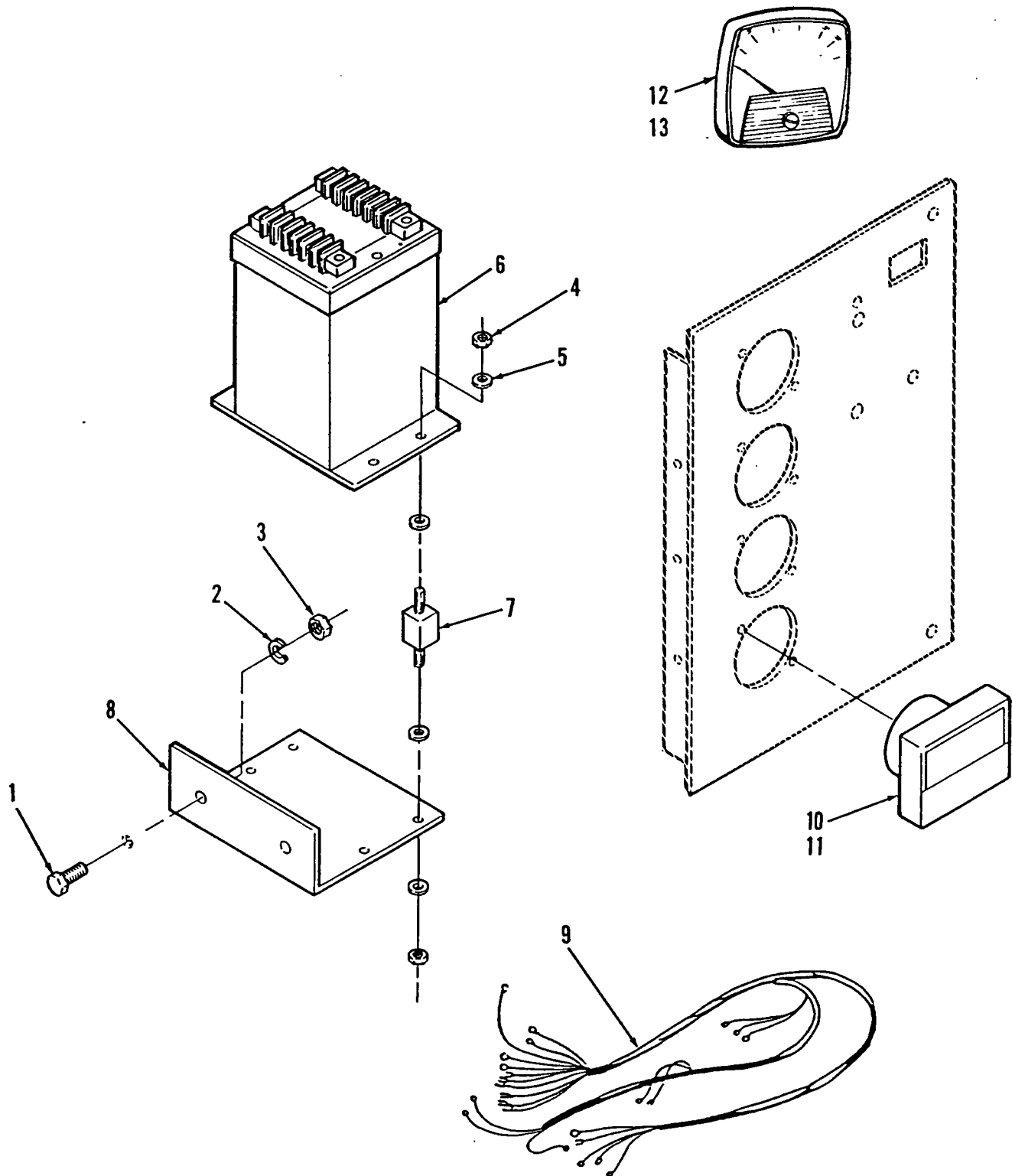
Control Housing



M-1202

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0010	24	Screw, Self-locking - Hex (1/4-20 x 1/2")	7	508-0203	1	Bushing, Cable
2	301-2904	1	Panel, Access - Top	8	821-0010	2	Screw, Self-locking - Hex (1/4-20 x 1/2")
3	301-2905	2	Panel, Access - Side	9	821-0014	4	Screw, Self-locking - Hex (5/16-18 x 1/2")
4	821-0014	8	Screw, Self-locking -Hex (5/16-18 x 1/2")	10	301-4125	1	Bracket, Double Angle
5	508-1000	4	Channel, Rubber	11	301-4110	1	Panel, Control - Blank
6	331-0088	1	Bushing, Cable	12	301-4118	1	Housing, Control

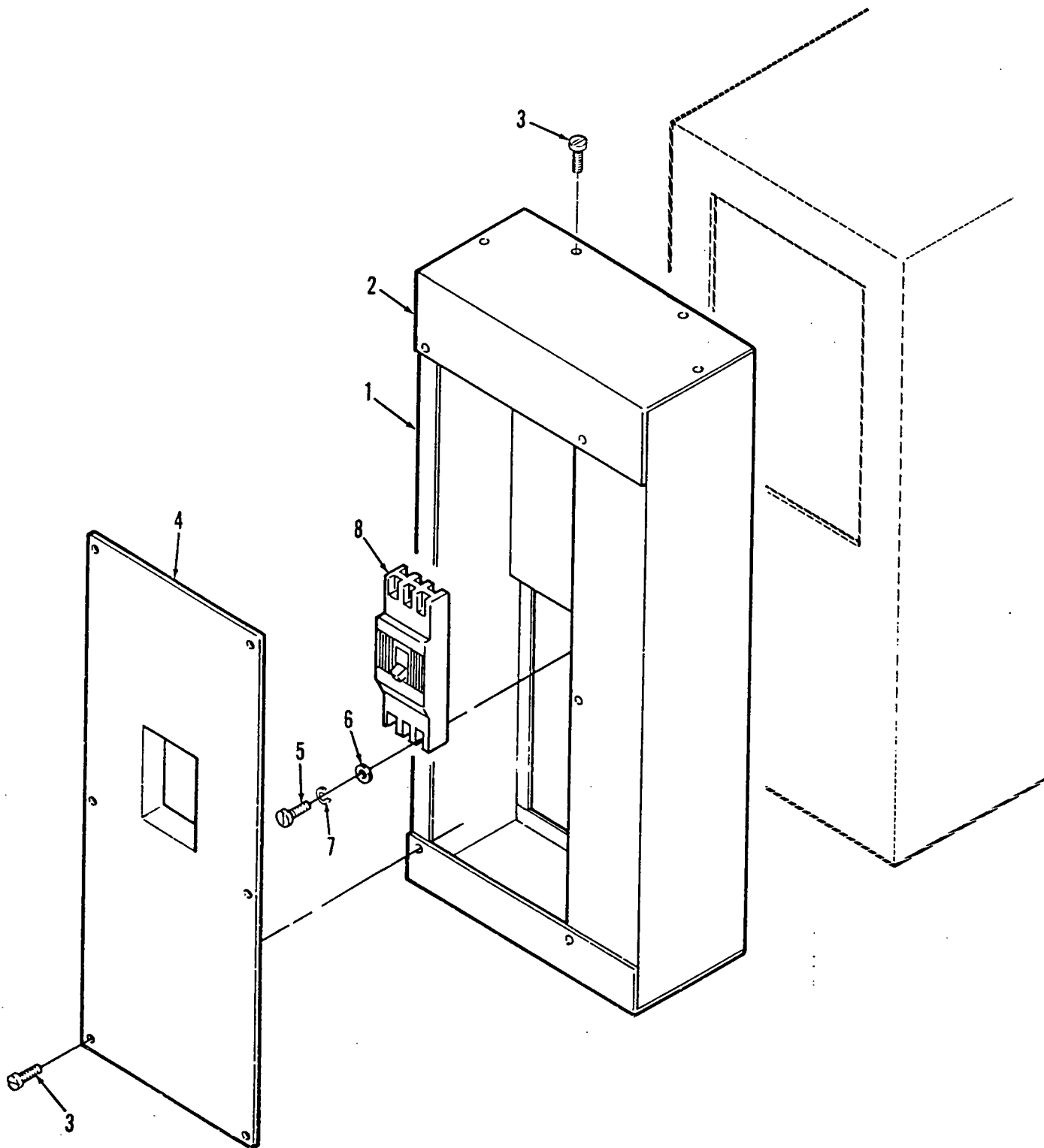
Wattmeter



Wattmeter

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0017	2	Screw, Self-locking - Hex (5/16-18 x 1/2")	10	302-1722	1	Wattmeter (Less Dial) - Begin Spec E
2	850-0045	2	Washer, Lock - Spring (5/16")	11			Dial
3	862-0014	2	Nut, Hex (5/16-18)		302-1721-12	1	Scale 0-400 kW
4	860-0008	8	Nut, Hex (#8-32)		302-1721-13	1	Scale 0-500 kW
5	856-0002	16	Washer, Lock - EIT (#8)		302-1721-14	1	Scale 0-600 kW
6			Transducer, Watt	12	302-1102	1	Wattmeter (Less Dial) - Spec B thru D
	302-1082	1	3 Phase, 60 Hz				Dial
	302-1083	1	3 Phase, 50 Hz	13			
7	402-0078	4	Mount, Vibration		302-1118	1	Scale 0-400 kW
8	301-6987	1	Bracket, Mounting		302-1119	1	Scale 0-500 kW
9	338-1936	1	Harness, Wiring		302-1120	1	Scale 0-600 kW

Circuit Breaker
Begin Spec E



Circuit Breaker Begin Spec E

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	301-9778	1	Box, Breaker	320-1480-11	1	500 Amp	
2	301-9779	2	Panel, Breaker	320-1480-12	1	600 Amp	
3	821-0010	8	Screw, Self-locking - Hex (1/4-20 x 1/2")	320-1481-07	1	700 Amp	
4			Cover, Box - Circuit Breaker	320-1481-08	1	800 Amp	
	301-9781	1	3" x 4" Breaker Hole	320-1481-09	1	1000 Amp	
	301-9793	1	2-1/2" x 3-5/8" Breaker Hole	320-1481-10	1	1200 Amp	
5			Screw, Mounting	320-1484-09	1	400 Amp	With 480 VAC Shunt Trip
	812-0157	4	400 - 600 Amp Breaker	320-1484-10	1	450 Amp	
	800-0031	4	700 - 1200 Amp Breaker	320-1484-11	1	500 Amp	
6			Washer, Flat	320-1484-12	1	600 Amp	
	526-0108	4	400 - 600 Amp Breaker	320-1485-07	1	700 Amp	
	526-0115	4	700 - 1200 Amp Breaker	320-1485-08	1	800 Amp	
7			Washer, Lock	320-1485-09	1	1000 Amp	
	850-0040	4	400 - 600 Amp Breaker	320-1485-10	1	1200 Amp	
	850-0045	4	700 - 1200 Amp Breaker				With 12 VDC Shunt Trip & Auxiliary Contacts
8			Breaker, Circuit - 3 Pole - Standard	320-1488-09	1	400 Amp	
	320-1460-09	1	400 Amp	320-1488-10	1	450 Amp	
	320-1460-10	1	450 Amp	320-1488-11	1	500 Amp	
	320-1460-11	1	500 Amp	320-1488-12	1	600 Amp	
	320-1460-12	1	600 Amp	320-1489-07	1	700 Amp	
	320-1461-07	1	700 Amp	320-1489-08	1	800 Amp	
	320-1461-08	1	800 Amp	320-1489-09	1	1000 Amp	
	320-1461-09	1	1000 Amp	320-1489-10	1	1200 Amp	
	320-1461-10	1	1200 Amp				With 24 VDC Shunt Trip & Auxiliary Contacts
			With Auxiliary Contacts	320-1491-09	1	400 Amp	
	320-1464-09	1	400 Amp	320-1491-10	1	450 Amp	
	320-1464-10	1	450 Amp	320-1491-11	1	500 Amp	
	320-1464-11	1	500 Amp	320-1491-12	1	600 Amp	
	320-1464-12	1	600 Amp	320-1492-07	1	700 Amp	
	320-1465-07	1	700 Amp	320-1492-08	1	800 Amp	
	320-1465-08	1	800 Amp	320-1492-09	1	1000 Amp	
	320-1465-09	1	1000 Amp	320-1492-10	1	1200 Amp	
	320-1465-10	1	1200 Amp				With 120 VAC Shunt Trip & Auxiliary Contacts
			With 12 VDC Shunt Trip	320-1495-09	1	400 Amp	
	320-1468-09	1	400 Amp	320-1495-10	1	450 Amp	
	320-1468-10	1	450 Amp	320-1495-11	1	500 Amp	
	320-1468-11	1	500 Amp	320-1495-12	1	600 Amp	
	320-1468-12	1	600 Amp	320-1496-07	1	700 Amp	
	320-1469-07	1	700 Amp	320-1496-08	1	800 Amp	
	320-1469-08	1	800 Amp	320-1496-09	1	1000 Amp	
	320-1469-09	1	1000 Amp	320-1496-10	1	1200 Amp	
	320-1469-10	1	1200 Amp				With 240 VAC Shunt Trip & Auxiliary Contacts
			With 24 VDC Shunt Trip	320-1500-09	1	400 Amp	
	320-1472-09	1	400 Amp	320-1500-10	1	450 Amp	
	320-1472-10	1	450 Amp	320-1500-11	1	500 Amp	
	320-1472-11	1	500 Amp	320-1500-12	1	600 Amp	
	320-1472-12	1	600 Amp	320-1501-07	1	700 Amp	
	320-1473-07	1	700 Amp	320-1501-08	1	800 Amp	
	320-1473-08	1	800 Amp	320-1501-09	1	1000 Amp	
	320-1473-09	1	1000 Amp	320-1501-10	1	1200 Amp	
	320-1473-10	1	1200 Amp				With 480 VAC Shunt Trip & Auxiliary Contacts
			With 120 VAC Shunt Trip	320-1504-09	1	400 Amp	
	320-1476-09	1	400 Amp	320-1504-10	1	450 Amp	
	320-1476-10	1	450 Amp	320-1504-11	1	500 Amp	
	320-1476-11	1	500 Amp	320-1504-12	1	600 Amp	
	320-1476-12	1	600 Amp	320-1505-07	1	700 Amp	
	320-1477-07	1	700 Amp	320-1505-08	1	800 Amp	
	320-1477-08	1	800 Amp	320-1505-09	1	1000 Amp	
	320-1477-09	1	1000 Amp	320-1505-10	1	1200 Amp	
	320-1477-10	1	1200 Amp				
			With 240 VAC Shunt Trip				
	320-1480-09	1	400 Amp				
	320-1480-10	1	450 Amp				

SUPPLEMENTARY PARTS LIST

This Supplementary Parts List Applies to the Standard LDFY Models listed below. Use these parts in place of/or in addition to those listed in Main Parts Catalog, 960-0229 and Supplementary Parts List, 960-1014 (8-77).

SET DATA TABLE

MODEL AND SPEC NUMBER	ELECTRICAL DATA				
	WATTS	VOLTS	HERTZ	WIRE	PHASE
417.0 LDFY-520R/*	417,000	220/380	50	4	3
417.0 LDFY-522R/*	417,000	240/416	50	4	3
462.0 LDFY-4XR/*	462,000	277/480	60	4	3

* - The Specification Letter Advances (A to B, B to C, etc.) with Manufacturing changes.

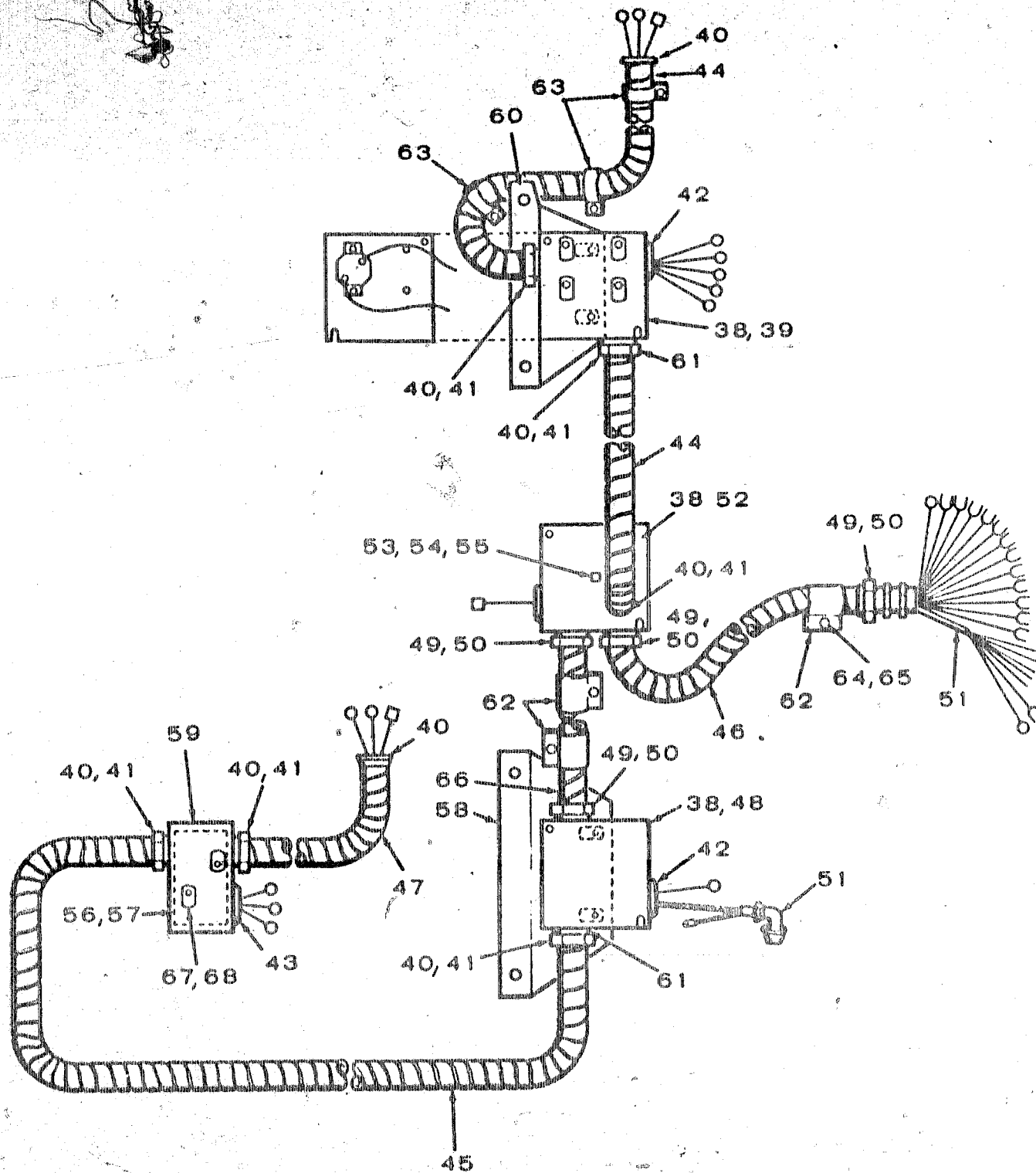
REPLACEMENT ENGINE

100-1584

1

Engine, Replacement

MISCELLANEOUS ENGINE PARTS



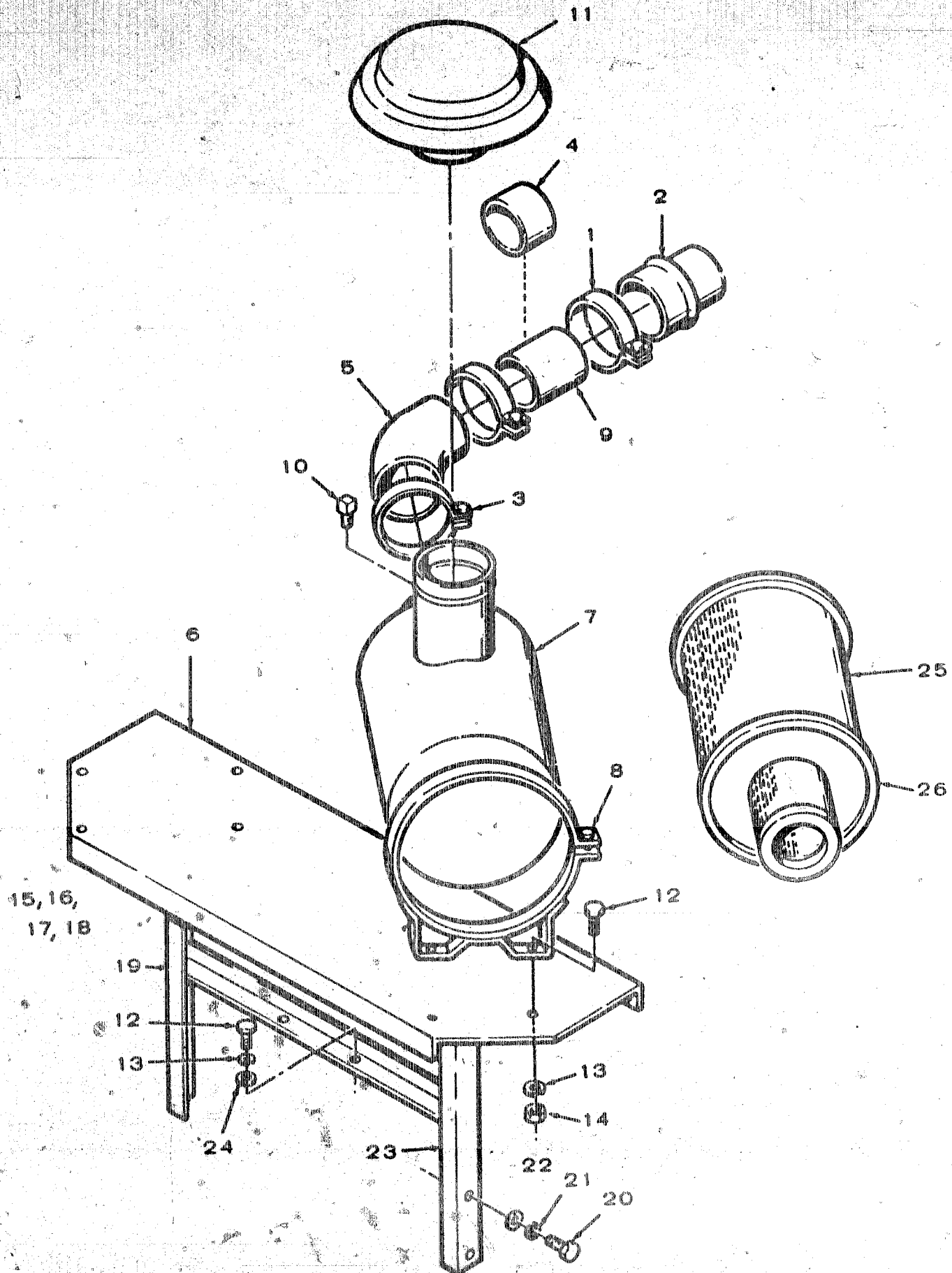
MISCELLANEOUS ENGINE PARTS

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
15	505-0185	1	Nipple, Half
35	501-0216	1	Line, Fuel Flex (Fuel Outlet)
36	338-1167	1	Harness, Engine Wiring (Includes Parts Marked *)
37	416-0632	1	Cable Assy, Starter
38	330-0093	3	*Box, Handi (Outlet) 4 x 4
39	330-0105	1	*Cover, Outlet Box
40	508-0201	8	*Bushing
41	331-0149	6	*Connector
42	508-0009	2	*Grommet
43	508-0001	1	*Grommet
44	331-0176	2	*Conduit, Flex
45	331-0163	1	*Conduit, Flex
46	331-0167	1	*Conduit, Flex
47	331-0155	1	*Conduit, Flex
48	330-0096	1	*Cover, Outlet Box
49	331-0150	4	*Connector
50	508-0202	4	*Bushing
51	338-1141	1	*Harness, Governor Wiring
52	330-0096	1	*Cover, Outlet Box
53	870-0196	1	*Nut, Insulator
54	508-0015	1	*Washer,
55	809-0035	1	*Screw, Sheet Metal - Roundhead (#8-32 x 3/4" lg)
56	330-0094	1	*Box, Handi (2 x 4)
57	330-0004	1	*Cover
58	301-4713	1	*Bracket, Box Mtg.
59	301-4716	1	*Bracket, Box Mtg.
60	301-4715	1	*Bracket, Box Mtg.
61	331-0153	4	*Washer, Reducing
62	331-0181	3	*Strap, Half
63	331-0180	3	*Strap, Half
64	821-0010	1	*Screw, Cap - Locking Head (1/4-20 x 1/2" lg)
65	870-0212	1	*Nut, Hex - Self Locking (1/4-20)
66	331-0165	1	*Conduit, Flex
67	813-0098	6	*Screw, Machine - Roundhead (#10-32 x 3/8" lg)
68	853-0008	6	*Washer, Lock - External (#10)
	151-0423	1	+Actuator, Governor (B.C.#11003-0-0-24)
	151-0399	1	+Control (Includes Mtg Screw) (B.C.#DYN1 1000-20-24)
	151-0441	1	+Lever, Actuator (B.C.#DYNC-208)
	151-0442	1	+Rod, Threaded (B.C.#GYRF-43-1)
	151-0443	2	+Bearing, Rod End (B.C.#DYNZ-47-2)
	151-0411	1	+Pick up, Magnetic (B.C.#DYNT 10200)
		1	+Bracket, Actuator Mtg (B.C.#DYNZ-68)

+ - Check for Barber-Colman numbers when ordering parts.

* - Parts Included in 338-1167 Wiring Harness Assembly.

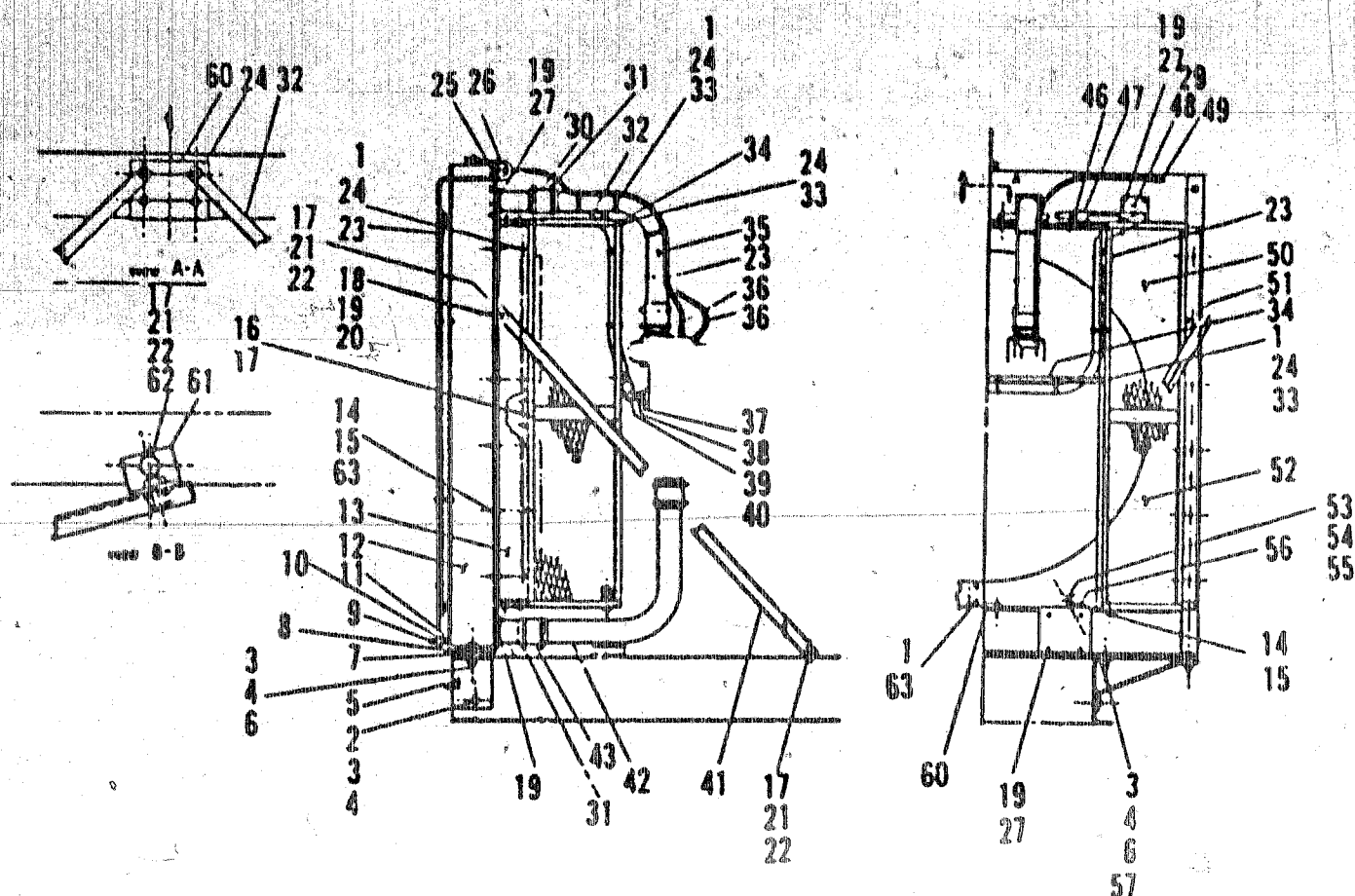
AIR CLEANER PARTS



AIR CLEANER PARTS

<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
1	503-0863	2	Clamp, Hose
2	503-0862	2	Reducer, Tube
3	503-0864	6	Clamp, Hose
4	140-1597	1	Tube, Air Cleaner
5	503-1004	2	Elbow
6	140-1595	1	Support, Air Cleaner
7	140-1537	2	Cleaner, Air (Includes Elements)
8	140-0757	4	Clamp, Air Cleaner
9	140-1598	1	Tube, Air Cleaner
10	140-1548	2	Indicator, Service
11	140-1545	2	Hood, Air Inlet
12	800-0071	10	Screw, Cap - Hex Head (7/16-14 x 1" lg)
13	850-0055	10	Washer, Lock - Spring (7/16")
14	862-0004	8	Nut, Hex (7/16-14)
15	800-0028	2	Screw, Cap - Hex Head (5/16-18 x 1" lg)
16	850-0045	2	Washer, Lock - Spring (5/16")
17	526-0022	4	Washer, Flat
18	870-0257	2	Nut, Hex - Self Locking (5/16-18)
19	140-1590	1	Brace, Air Cleaner
20	800-0131	2	Screw, Cap - Hex Head (5/8-11 x 1-1/4" lg)
21	850-0070	2	Washer, Lock - Spring (5/8")
22	526-0004	2	Washer, Flat (11/16" ID x 3/4" OD x 9/64" Thk)
23	140-1591	1	Brace, Air Cleaner
24	526-0014	2	Washer, Flat (29/64" ID x 1-1/2" OD x 1/8" Thk)
25	140-1630	1	Element, Primary
26	140-1631	1	Element, Safety

RADIATOR COOLING INSTALLATION (179-1058)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	526-0018	26	Washer, Flat (17/64" ID X 5/8" OD X 1/16" Thk)
2	800-0156	2	Screw, Cap - Hex Head (3/4-10 X 2-1/4")
3	850-0079	6	Washer, Lock - Spring (3/4")
4	862-0020	6	Nut, Hex (3/4-10)
5	130-1199	2	Support, Radiator
6	800-0159	4	Screw, Cap - Hex Head (3/4-10 X 3")
7	130-1198	1	Plate, Radiator Mounting
8	370-0028	2	Plate
9	505-0185	1	Nipple, Pipe - Half (1/2 X 1-1/2")
10	504-0011	1	Valve
11	505-0100	1	Nipple, Close (1/2 X 1-1/8")
12	130-1237	1	Radiator
13	130-1328	2	Guard, Fan
14	821-0016	14	Screw, Cap - Hex Head (5/16-18 X 3/4")
15	870-0257	14	Nut, Hex - Locking (5/16-18)
16	800-0094	6	Screw, Cap - Hex Head (1/2-13 X 2")
17	850-0060	8	Washer, Lock - Spring (1/2")
18	800-0051	2	Screw, Cap - Hex Head (3/8-16 X 1-1/4")
19	850-0050	26	Washer, Lock - Spring (3/8")
20	862-0003	2	Nut, Hex (3/8-16)
21	800-0091	6	Screw, Cap - Hex Head (1/2-13 X 1-1/4")
22	862-0005	6	Nut, Hex (1/2-13)
23	332-0941	16	Tie, Cable
24	821-0018	34	Screw, Cap - Hex Head Locking (1/4-20 X 5/8")

RADIATOR COOLING INSTALLATION (179-1058)

<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
25	503-0547	1	Clamp, Hose
26	503-0803	1	Hose, Rubber
30	503-0788	4	Hose, Radiator
31	503-0621	12	Clamp, Hose
32	130-1537	2	Brace, Fan Guard
33	870-0243	6	Nut, Hex - Locking (1/4-20)
34	130-1333	2	Brace, Fan Guard
35	130-1251	2	Tube, Radiator Inlet
36	501-0247	2	Line, Flexible
37	505-0297	1	Bushing, Reducer (1-1/4" to 1")
38	505-0102	1	Nipple, Close (1 X 1-1/2")
39	505-0132	1	Elbow, Pipe (1")
40	505-0324	1	Adapter, Pipe
41	130-1045	2	Support, Radiator
42	130-1253	1	Tube, Radiator Outlet
43	503-0856	2	Hose, Radiator
46	503-0398	2	Clamp, Hose
47	503-0860	1	Hose
49	502-0041	2	Elbow, Inverted Male (1/4")
50	130-1247	2	Shroud, Partial - Fan
51	130-1228	2	Bracket, Brace Mounting
52	130-1254	2	Shroud, Partial - Fan
53	800-0028	2	Screw, Cap - Hex Head (5/16-18 X 1")
54	850-0045	2	Washer, Lock - Spring (5/16")
55	862-0015	2	Nut, Hex (5/16-18)
56	130-1331	2	Brace, Fan Guard
57	403-1141	2	Washer, Square Bevel
60	130-1249	2	Bracket, Fan Shroud
61	130-0944	2	Bracket, Brace Mounting
62	526-0028	2	Washer, Flat (1/2")
63	526-0155	12	Washer, Flat (5/16")
64	526-0018	26	Washer, Flat
65	148-0274	2	Bracket

NOTE: to order all parts listed for conversion,
order by number 179-1058.

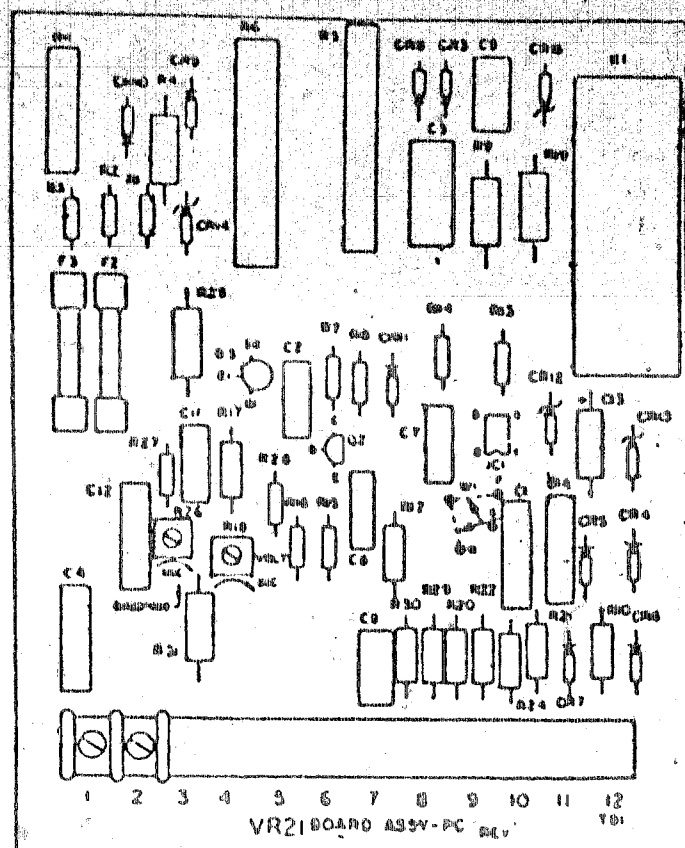
GENERATOR

<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
44	Rotor, Wound		
	201-1789	1	520R Sets (220 / 380 Volts)
	201-1789	1	522R Sets (240 / 416 Volts)
	201-1788	1	4XR Sets (277 / 480 Volts)

CONTROL (AC Portion)

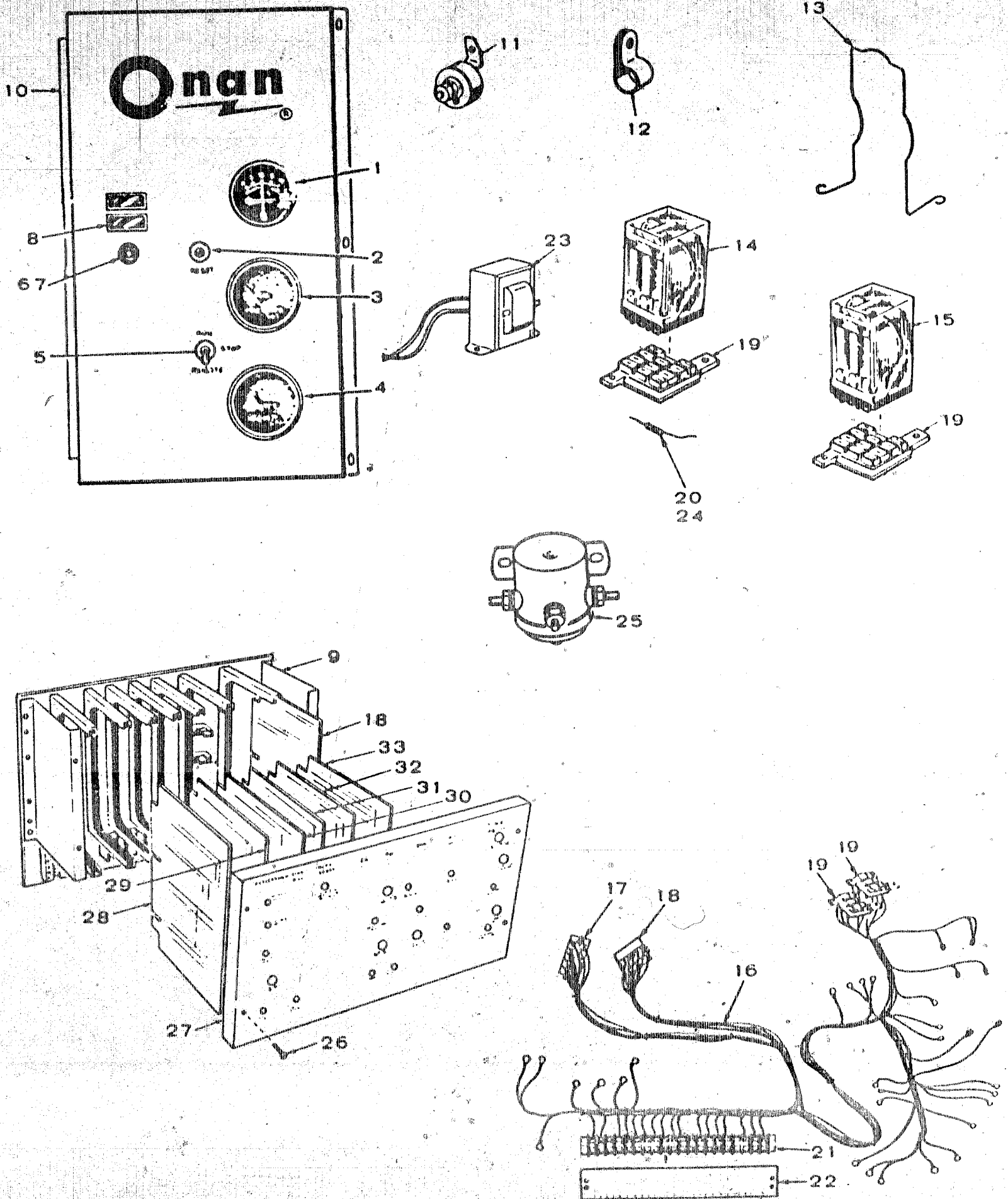
<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
25	332-2030	1	Regulator Board, Voltage (See Separate Group for Components)
28	301-4668	1	Box, Control
29	321-0223	4	Fuse, 15 Ampere
30	321-0177	1	Block, Fuse - 3 Pole
31	321-0176	1	Block, Fuse - 2 Pole
32	338-1104	1	Harness, Wiring
	151-0402	1	Potentiometer, Governor Adj.

VOLTAGE REGULATOR BOARD ASSEMBLY



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	332-1954	1	Printed Circuit Board
C1,14	355-0042	2	Capacitor - 47 Mfd. 250 Volt
C2,7	355-0043	2	Capacitor - 22 Mfd. 250 Volt
C3	355-0047	1	Capacitor - 47 Mfd. 400 Volt
C4,12	355-0044	2	Capacitor - 47 Mfd. 250 Volt
C5,8	355-0046	2	Capacitor - 1 Mfd. 100 Volt
C6	355-0058	1	Capacitor - .33 Mfd. 250 Volt
C11	355-0048	1	Capacitor - .1 Mfd. 400 Volt
C13	356-0039	1	Capacitor - Electrolytic, 100 Mfd. 10 Volt
CR3 thru 11	357-0014	9	Rectifier - Silicon
CR12	359-0036	1	Diode, Zener - 5.6 Volt
CR13	359-0025	1	Diode, Zener - 20 Volt
CR14	359-0026	1	Diode, Zener - 18 Volt
F1,2,3	321-0204	3	Fuse - 1.4 Amp
IC1	367-0005	1	Integrated Circuit
Q2	362-0017	1	Transistor - Silicon (NPN)
Q3	361-0004	1	Transistor - Unijunction
R1	350-0355	1	Resistor - 1/2 Watt, 47-Ohm
R2,3	350-0351	2	Resistor - 1/2 Watt, 33-Ohm
R4	350-1075	1	Resistor - 2 Watt, 4,700,000-Ohm
R5	353-0040	1	Resistor, Fixed - 10 Watt, 270-Ohm
R6	353-0039	1	Resistor, Fixed - 15 Watt, 5,000-Ohm
R7	350-0398	1	Resistor - 1/2 Watt, 3,000-Ohm
R8,16	350-0447	2	Resistor - 1/2 Watt, 330,000-Ohm
R10	351-0685	1	Resistor - 1/2 Watt, 51,000-Ohm
R11	352-0151	1	Resistor, Fixed - 5 Watt, 15,000-Ohm
R12	351-0909	1	Resistor - 1/2 Watt, 90,900-Ohm
R13	350-0411	1	Resistor - 1/2 Watt, 10,000-Ohm
R14	350-0443	1	Resistor - 1/2 Watt, 220,000-Ohm
R15,27	350-0435	2	Resistor - 1/2 Watt, 100,000-Ohm
R17	351-0293	1	Resistor - Metal Film - 1/4 Watt, 11,800-Ohm
R18	303-0210	1	Potentiometer - 1/2 Watt, 5,000-Ohm
R20,22,29 & 30	351-0520	4	Resistor - 1/4 Watt, 28,000-Ohm
R21	351-0522	1	Resistor, Metal Film - 1/4 Watt, 5,110,000-Ohm
R24	351-0523	1	Resistor, Metal Film - 1/4 Watt, 8,870,000-Ohm
R25,31	350-1011	2	Resistor - 2 Watt, 10,000-Ohm
R26	303-0211	1	Potentiometer - 1/2 Watt, 100,000-Ohm
R28	350-0568	1	Resistor - 1/2 Watt
TB1	332-1252	1	Terminal Block
CR15	359-0015	1	Diode, Zener - 24 Volt
	321-0163	6	Clip - Fuse
K1	307-1063	1	Relay - Magnetic Reed
R9	350-1014	1	Resistor - 2 Watt, 13,000-Ohm
R10	350-1007	1	Resistor - 2 Watt, 5,600-Ohm

CONTROL (ENGINE SECTION)



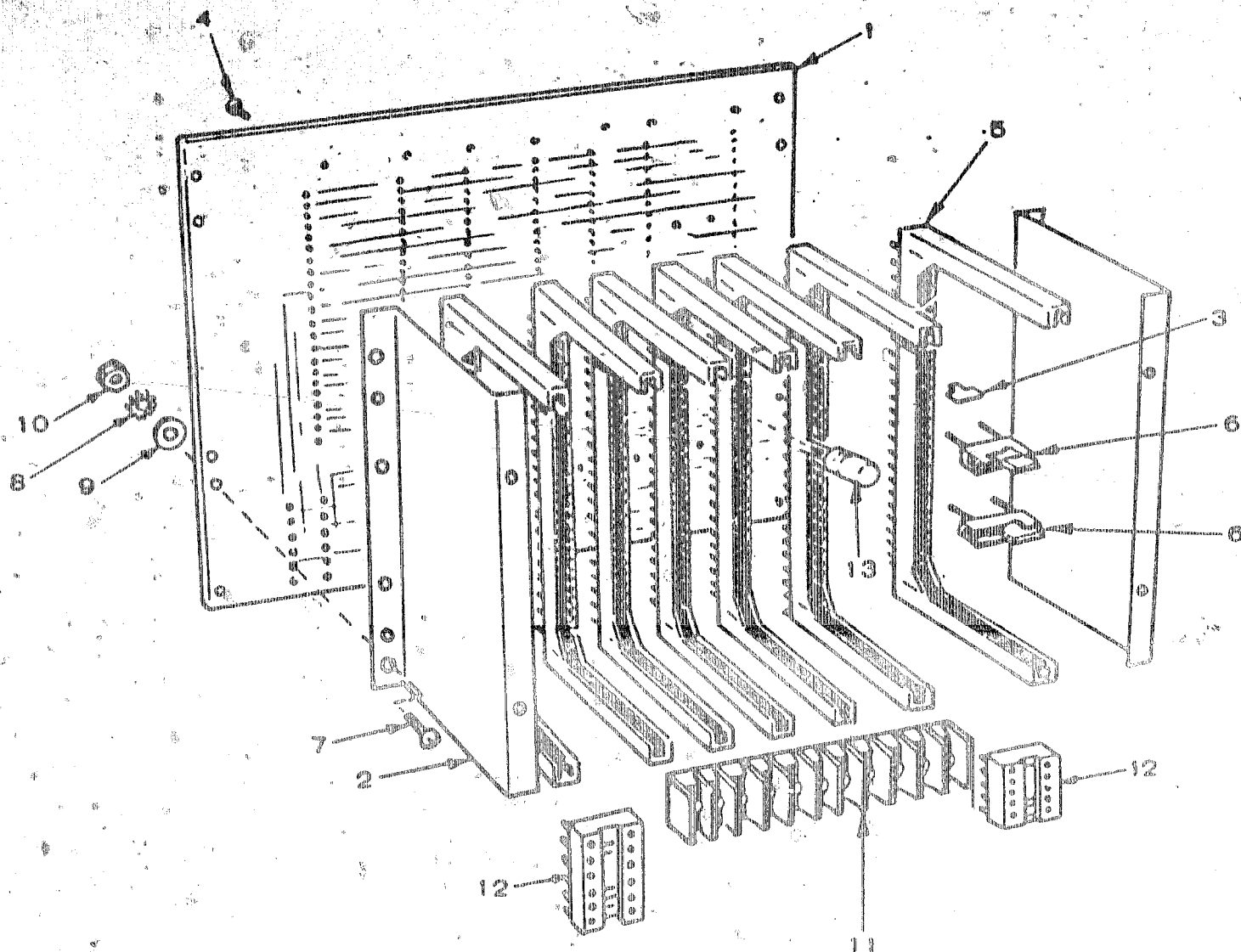
CONTROL (ENGINE SECTION)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	302-0061	1	Ammeter (30-0-30)	16	338-1016	1	Harness, Wiring (Includes Parts Marked †)
2	308-0410	1	Switch, Push	17	332-0984	2	†Connector, Plug Electrical (12 Pin)
3	193-0243	1	Gauge, Oil Pressure (0-80)	18	300-1570	1	*Module, Time Delay Start-Stop
4	193-0245	1	Gauge, Water Temperature	19	323-0785	2	†Socket, Relay
5	SWITCH, TOGGLE			20	357-0004	1	†Diode
	308-0220	1	Standard Sets	21	332-1005	1	†Board, Terminal (20 Place)
	308-0347	1	Penn State Sets	22	332-1559	1	Strip, Marker
6	321-0147	1	Fuse - 5 Amp	23	315-0361	1	Transformer, Step-down
7	321-0217	1	Fuseholder	24	357-0004	2	Diode
8	LIGHT, INDICATOR			25	307-0061	1	Relay - Start Solenoid
	322-0119	1	Overcrank	26	015-0387	4	Screw, Machine - Pan Head, Cross-Recessed Drive (#6-32 x 1/4")
	322-0120	1	Low Oil Pressure	27	301-4015	1	Cover, Access - Control Modules
	322-0121	1	High Engine Temperature	28	300-1573	1	*Module, Cycle Cranker
	322-0122	1	Low Engine Temperature	29	300-1574	1	*Module, Start-Disconnect
	322-0123	1	Overspeed	30	300-1575	1	*Module, Overspeed Control
	322-0135	1	Over Voltage	31	300-1576	1	*Module, Monitor No 1
9	300-1572	1	*Chassis, Control	32	300-1577	1	*Module, Monitor No 2
10	301-4692	1	Panel, Control	33	300-1578	1	*Module, Engine Shutdown
11	193-0250	2	Resistor, Gauge				
12	332-0052	1	Clamp, Loop				
13	307-1157	2	Spring, Hold-down - Relay				
14	307-1061	1	Relay, Armature - Starter Protection				
15	307-1056	1	Relay, Armature - Start Disconnect				

* - See Separate Group for Components

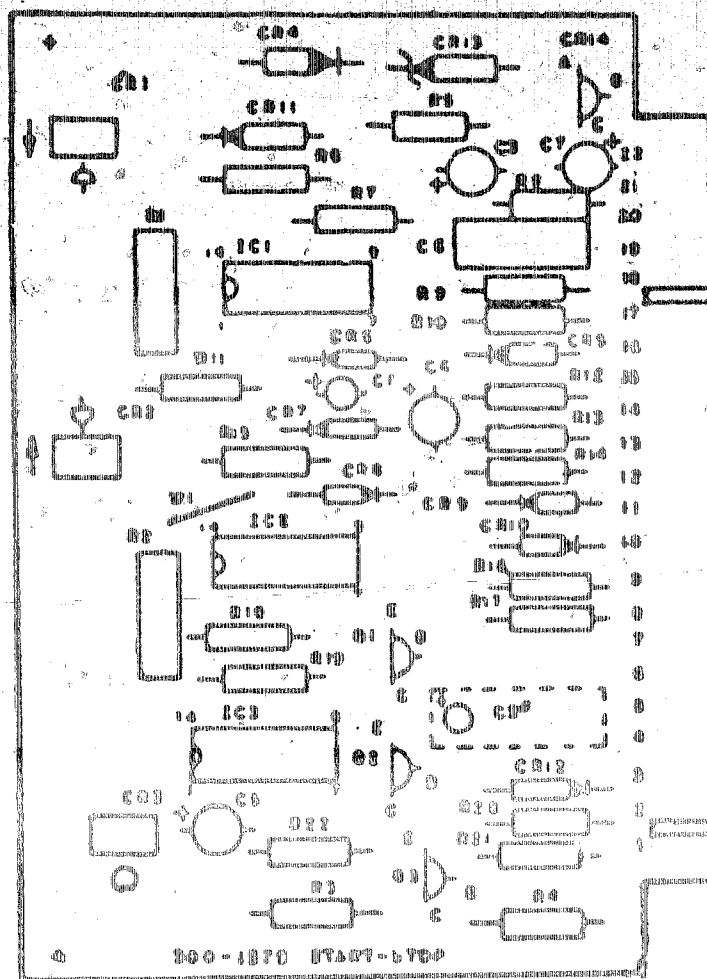
† - Included in Wiring Harness

CONTROL CHASSIS



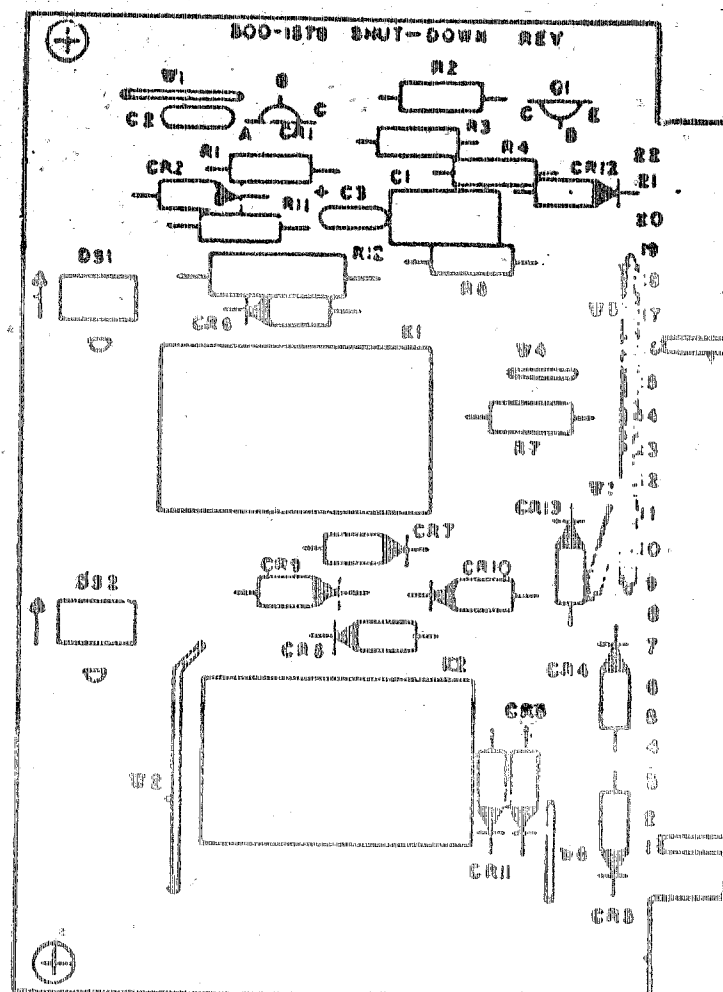
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-1572	1	Chassis, Control (Complete)
1	332-1884	1	Board, Printed Circuit
2	301-3880	2	Bracket, Module Cover Mtg.
3	332-1917	14	Plug, Keying
4	812-0029	14	Screw, Machine - Roundhead (#4-40 x 3/8" long)
5	332-1887	7	Socket Plug In Module
6	300-0324	2	Switch, Slide
7	812-0059	4	Screw, Machine - Roundhead (#6-32 x 1/4" long)
8	853-0003	4	Washer, Lock - External (#6)
9	526-0047	4	Washer, Flat (.147" ID x 5/16" OD x 1/32" Thk)
10	840-0006	4	Nut, Hex (#6-32)
11	332-1889	1	Block, Terminal (11 Place)
12	323-0083	2	Connector, Receptacle, Electrical (12 Pin)
13	356-0068	1	Capacitor, Electrolytic (180 MFD - 40 Volt)

TIME DELAY START-STOP MODULE (300-1579)



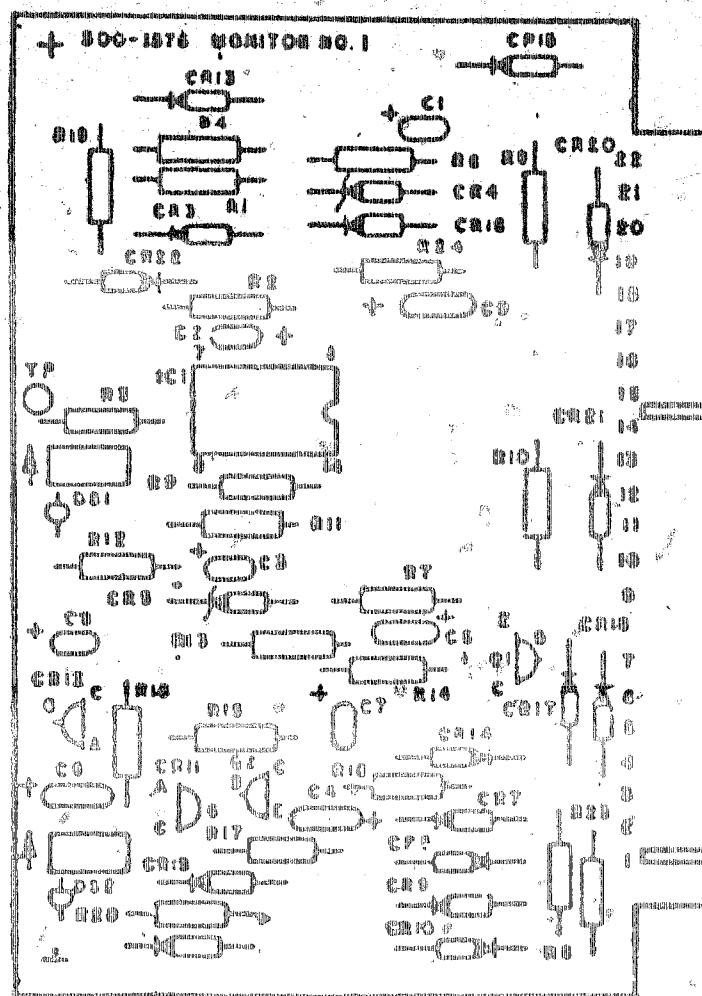
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-1579	1	Module, Time Delay Start-Stop (Complete)	IC3	357-0017	1	Integrated Circuit, Counter 7 Stage
C1,2	356-0059	2	Capacitor, Electrolytic (2.2 Mfd., 35 Volt)	Q1,2,3	362-0011	3	Transistor, Signal
C3,4,5	356-0051	3	Capacitor, Electrolytic (6.8 Mfd., 35 Volt)	R1,2	303-0169	2	Potentiometer (3.5 Megohm)
C6	355-0062	1	Capacitor, Composition (1 Mfd., 100 Volt)	R3,19	350-0418	2	Resistor (20,000-Ohm, 2 Watt)
C7	356-0053	1	Capacitor, Tantalum (1.0 Mfd., 35 Volt)	R7	350-0370	1	Resistor (200-Ohm, 1/2 Watt)
CR1	322-0172	1	Lamp, Indicator (Green)	R5,11,15,18	350-0548	4	Resistor (10,000-Ohm, 2 Watt)
CR2	322-0157	1	Lamp, Indicator (Red)	R6	350-0373	1	Resistor (470-Ohm, 1/2 Watt)
CR3	322-0171	1	Lamp, Indicator (Red-Green)	R8	350-0505	1	Resistor (27-Ohm, 1/2 Watt)
CR4-12	357-0004	9	Receptacle, Lamp (400 Volt, 400 MA)	R10,14,16,22	350-0394	4	Resistor (2,000-Ohm, 1/2 Watt)
CR13	359-0002	1	Diode, Zener (13 Volt, 400 MW)	R12	350-0443	1	Resistor (220,000-Ohm, 1/2 Watt)
CR14	364-0011	1	Rectifier, Gate Control	R13,17,20,21	350-0537	4	Resistor (12,000-Ohm, 2 Watt)
IC1,2	367-0016	2	Integrated Circuit, Timing	R4	350-0376	1	Resistor (360-Ohm, 1/2 Watt)
				R9	350-0524	1	Resistor (100-Ohm, 1/2 Watt)

SHUTDOWN MODULE (300-1578)



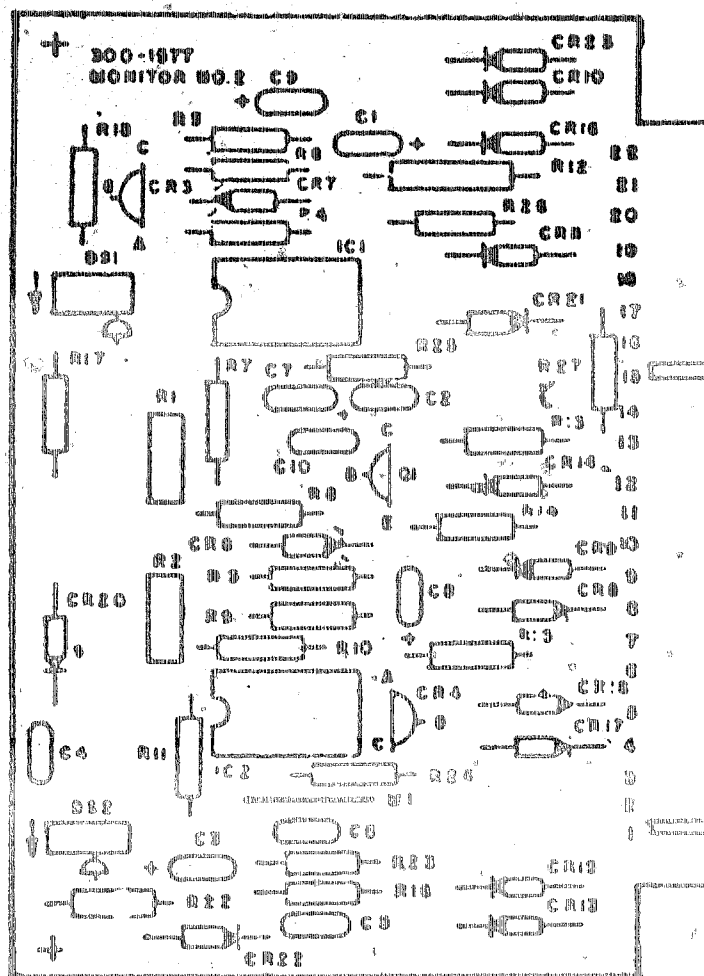
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-1578	1	Module, Shut Down (Complete)
C1	355-0045	1	Capacitor, Composition (1 Mfd., 200 Volt)
	322-0175	2	Receptacle, Lamp
DS1	322-0157	1	Lamp, Indicator (Red)
DS2	322-0172	1	Lamp, Indicator (Green)
C2	355-0041	1	Capacitor, Ceramic (.22 Mfd., 35 Volt)
C3	356-0051	1	Capacitor, Tantalum (6.8 Mfd., 35 Volt)
CR1	364-0011	1	Rectifier, Gate Control
CR2-13	357-0004	12	Rectifier, Diode (400 Volt, 400 MA)
K1,2	307-1076	2	Relay
Q1	362-0026	1	Transistor, Signal
R2	350-0398	1	Resistor (3,000-Ohm, 1/2 Watt)
R1	350-0505	1	Resistor (2.7-Ohm, 1/2 Watt)
R7	350-0533	1	Resistor (560-Ohm, 1/2 Watt)
R3	350-0520	1	Resistor (270-Ohm, 1/2 Watt)
R4	350-0540	1	Resistor (2,200-Ohm, 1/2 Watt)
R6	350-0379	1	Resistor (470-Ohm, 1/2 Watt)
R11,12	350-0393	2	Resistor (1,000-Ohm, 1/2 Watt)

MONITOR NUMBER ONE MODULE (300-1576)



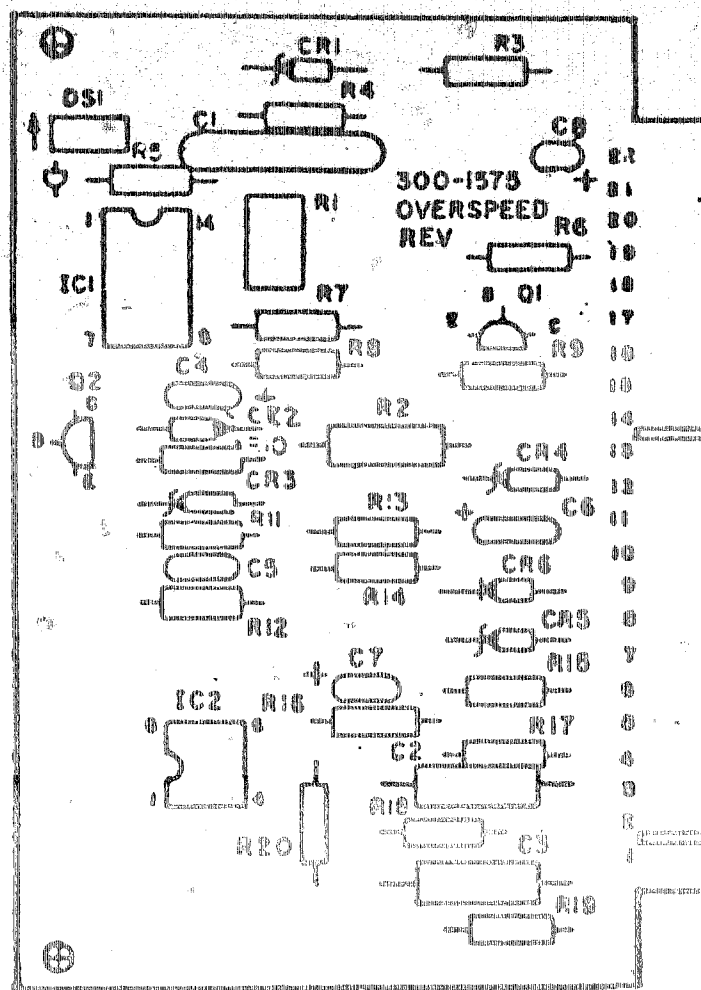
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-1576	1	Module, Monitor Number One (Complete)	R1	350-0397	1	Resistor (2,700-Ohm, 1/2 Watt)
C1,2,3	356-0051	5	Capacitor, Electrolytic (6.8 Mfd., 35 Volt)	R2	350-0446	1	Resistor (300,000-Ohm, 1/2 Watt)
C4	356-0053	1	Capacitor, Tantalum (1 Mfd., 35 Volt)	R3	350-0584	1	Resistor (10 Megohm, 1/2 Watt)
C5,6,9	355-0041	3	Capacitor, Ceramic (.22 Mfd., 35 Volt)	R4,6	350-0536	2	Resistor (1,000-Ohm, 1/2 Watt)
CR3,7-10, 13-23	357-0004	16	Rectifier, Diode (400 Volt, 400 MA)	R5,23	350-0404	2	Resistor (5,100-Ohm, 1/2 Watt)
CR4	359-0026	1	Diode, Zener (18 Volt, 400 MW)	R7,18	350-0505	2	Resistor (27-Ohm, 1/2 Watt)
CR5	359-0002	1	Diode, Zener (13 Volt, 400 MW)	R8	350-0544	1	Resistor (4,700-Ohm, 1/2 Watt)
CR11,12	364-0011	2	Rectifier, Gate Control	R9	350-0548	1	Resistor (10,000-Ohm, 1/2 Watt)
DS1,2	322-0157	2	Lamp, Indicator (Red)	R10,17	350-0529	2	Resistor (270-Ohm, 1/2 Watt)
IC1	367-0018	1	Integrated Circuit, Tuning	R11,15	350-0398	2	Resistor (3,000-Ohm, 1/2 Watt)
Q1,2	362-0026	2	Transistor, Signal	R12	350-0380	1	Resistor (510-Ohm, 1/2 Watt)
				R13,14	350-0379	2	Resistor (470-Ohm, 1/2 Watt)
				R16	350-0540	1	Resistor (2,200-Ohm, 1/2 Watt)
				R19,20	350-0303	2	Resistor (18,000-Ohm, 1/2 Watt)
				R24	350-0451	1	Resistor (470,000-Ohm, 1/2 Watt)
					322-0175	2	Receptacle, Lamp

MONITOR NUMBER TWO MODULE (300-1577)



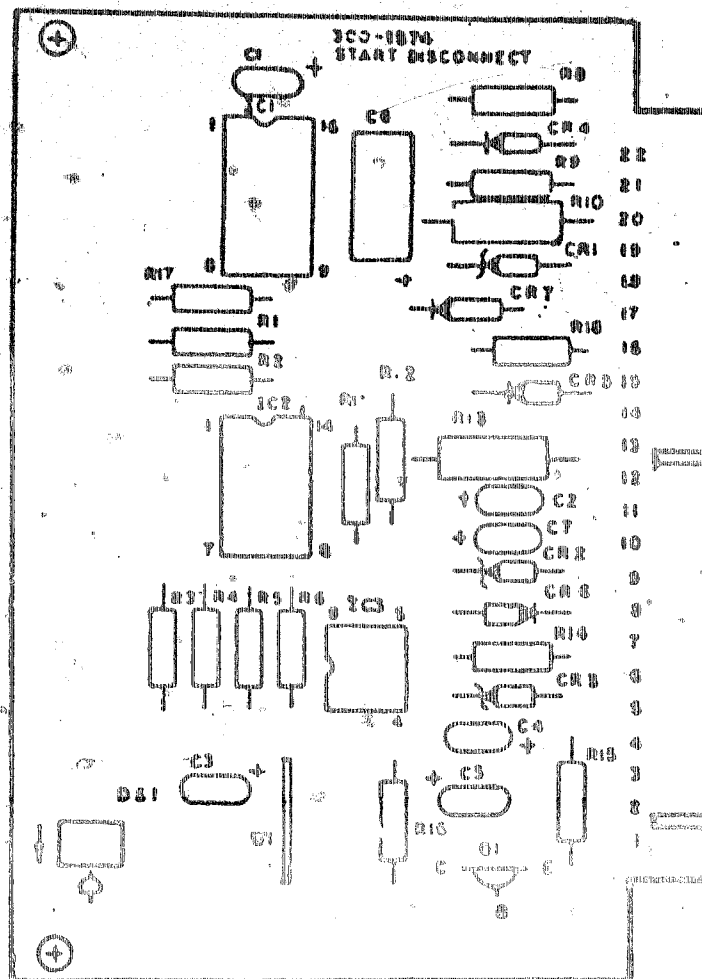
REF. NO.	PART NO.	QTY. used	PART DESCRIPTION
	300-1577	1	Module, Monitor Number Two
C1	356-0066	1	Capacitor, Electrolytic (47 Mfd.)
C2	356-0059	1	Capacitor, Electrolytic (2.2 Mfd., 35 Volt)
C3,8,9	356-0051	3	Capacitor, Electrolytic (6.8 Mfd., 35 Volt)
C4,5,6,7,10	355-0041	5	Capacitor, Ceramic (.22 Mfd.)
CR3,4	364-0011	2	Rectifier, Gate Control
CR5-9,13-18,20-23	357-0004	14	Rectifier, Diode (400 Volt, 400 MA)
CR6	359-0016	1	Diode, Zener (6.8 Volt, 400 MW)
CR7	359-0033	1	Diode, Zener (14 Volt, 5 W)
IC1,2	367-0016	2	Integrated Circuit, Timing
DS1,2	322-0157	2	Lamp, Indicator (Red)
	322-0175	2	Receptacle, Lamp
Q1	362-0011	1	Transistor, Signal
R1,2	309-0169	2	Potentiometer (3.5 Megohm)
R3	350-0420	1	Resistor (24,000-Ohm, 1/2 Watt)
R4,7,10,13,16	350-0548	5	Resistor (10,000-Ohm, 1/2 Watt)
R5,15	350-0379	2	Resistor (470-Ohm, 1/2 Watt)
R6,9	350-0398	2	Resistor (3,000-Ohm, 1/2 Watt)
R8	350-0418	1	Resistor (20,000-Ohm, 1/2 Watt)
R11	350-0466	1	Resistor (2 Megohm, 1/2 Watt)
R12	350-0672	1	Resistor (240-Ohm, 1/2 Watt)
R14	350-0389	1	Resistor (1,200-Ohm, 1/2 Watt)
R17,18	350-0363	2	Resistor (1,800-Ohm, 1/2 Watt)
R22,23	350-0505	2	Resistor (2,700-Ohm, 1/2 Watt)
R24,25,27	350-0451	3	Resistor (470,000-Ohm, 1/2 Watt)
R26	350-0421	1	Resistor (27,000-Ohm, 1/2 Watt)

OVERSPEED MODULE (300-1575)



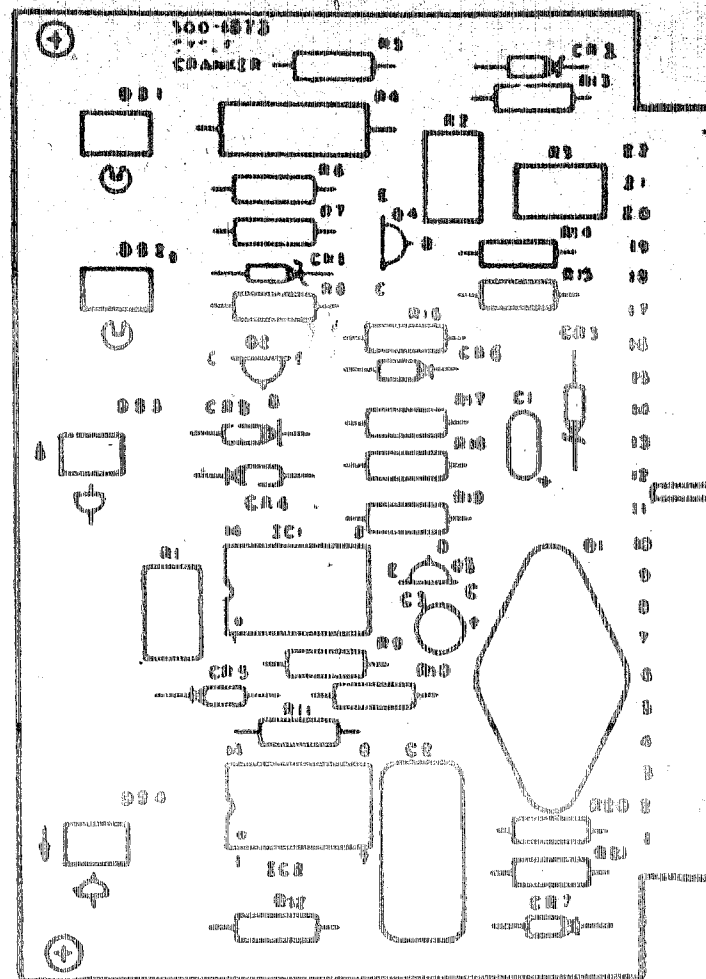
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-1575	1	Module, Overspeed (Complete)	CR6	357-0004	1	Rectifier, Diode (400 Volt, 400 MA)
C1	355-0043	1	Capacitor, Composition (22 Mfd., 200 Volt)	DS1	322-0172	1	Lamp, Indicator (Green)
C2,3	355-0010	2	Capacitor, Composition (.0022 Mfd., 100 Volt)		322-0175	1	Receptacle, Lamp
C4,8	356-0051	2	Capacitor, Electrolytic (6.8 Mfd., 35 Volt)	IC1	367-0002	1	Integrated Circuit
C5	355-0049	1	Capacitor, Ceramic (22 Mfd., 1000 Volt)	IC2	367-0001	1	Integrated Circuit
C6,7	358-0066	2	Capacitor, Tantalum (47 Mfd., 20 Volt)	Q1,2	352-0011	2	Transistor, Signal
CR1,3	359-0016	2	Diode, Zener (6.8 Volt, 400,000 Watt)	R1	303-0191	1	Potentiometer (5,000-Ohm, 4 Watt)
CR2	359-0017	1	Diode, Zener (5.1 Volt, 400 MW)	R2	350-0683	1	Resistor (680-Ohm, 1 Watt)
CR4	359-0032	1	Diode, Zener (8.2 Volt, 400 MW)	R3	350-0379	1	Resistor (470-Ohm, 2 Watt)
CR5	359-0002	1	Diode, Zener (13 Volt, 400 MW)	R4,6,7	350-0411	7	Resistor (10,000-Ohm, 1/2 Watt)
				8,10,17,19			
				R5	350-0414	1	Resistor (13,000-Ohm, 1/2 Watt)
				R9	350-0427	1	Resistor (47,000-Ohm, 1/2 Watt)
				R11,13	350-0394	2	Resistor (2,000-Ohm, 1/2 Watt)
				R14	350-0380	1	Resistor (510-Ohm, 1/2 Watt)
				R15,18	350-0536	2	Resistor (1,000-Ohm, 2 Watt)
				R12,16,20	350-0451	3	Resistor (470,000-Ohm, 1/2 Watt)

START DISCONNECT MODULE (300-1574)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-1574	1	Module, Start Disconnect (Complete)
C1,2,3	356-0051	3	Capacitor, Electrolytic (6.8 Mfd., 35 Volt)
C4,7	356-0066	2	Capacitor, Tantalum (.47 Mfd.)
C5	356-0059	1	Capacitor, Electrolytic (2.2 Mfd)
C6	355-0045	1	Capacitor, Composition (.1 Mfd)
DS1	322-0172	1	Lamp, Indicator
CR1,2	359-0033	2	Diode, Zener (14 Volt, 5 Watt)
CR3	359-0032	1	Diode, Zener (8.2 Volt)
CR4,5,6,7	357-0004	4	Rectifier, Diode (400 Volt, 400 Milliampere)
IC1	367-0014	1	Integrated Circuit (Multivibrator)
IC2	367-0013	1	Integrated Circuit (Dual, 2 Input, and Gate)
IC3	367-0001	1	Integrated Circuit (Oral Amp)
Q1	362-0011	1	Transistor, Signal
R1,2,5,6	350-0418	1	Resistor (20,000-Ohm, 1/2 Watt)
R3,11,12,15,16	350-0548	5	Resistor (10,000-Ohm, 1/2 Watt)
R4,8	350-0422	2	Resistor (30,000-Ohm, 1/2 Watt)
R9	350-0435	1	Resistor (100,000-Ohm, 1/2 Watt)
R10,13	350-0672	2	Resistor (240-Ohm, 1 Watt)
R14	350-0404	1	Resistor (1,000-Ohm, 1/2 Watt)
R18	350-0536	1	Resistor (1,000-Ohm, 1/2 Watt)
R17	350-0459	1	Resistor (1 Megohm, 1/2 Watt)
	322-0175	1	Receptacle, Lamp

CYCLE CRANKER MODULE (300-1573)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-1573	1	Module, Cycle Cranker (Complete)	R1	303-0171	1	Potentiometer (100,000-Ohm)
C1	356-0066	1	Capacitor, Tantalum (.47 Mfd., 20 Volt)	R2,3	303-0191	2	Potentiometer (5000-Ohm)
C2	355-0042	1	Capacitor (.47 Mfd., 250 Volt)	R4	350-1132	1	Resistor (470-Ohm, 2 Watt)
DS1,2	322-0171	2	Lamp, Indicator (Red-Green)	R5,16	350-0532	2	Resistor (470-Ohm, 1/2 Watt)
DS3	322-0157	1	Lamp, Indicator, (Red)	R6,8	350-0537	2	Resistor (1200-Ohm, 1/2 Watt)
DS4	322-0172	1	Lamp, Indicator (Green)	R7	350-0382	1	Resistor (820-Ohm, 1/2 Watt)
CR1	359-0032	1	Diode, Zener - 8.2 Volt	R9	350-0394	1	Resistor (2000-Ohm, 1/2 Watt)
CR2	359-0016	1	Diode, Zener - 6.8 Volt	R10	350-0418	1	Resistor (20,000-Ohm, 1/2 Watt)
CR3	359-0002	1	Diode, Zener - 13 Volt	R11,13,16	350-0548	5	Resistor (10,000-Ohm, 1/2 Watt)
CR4-B	357-0004	5	Rectifier, Diode - 400 Volt 400 MA	R12	350-0437	1	Resistor (120,000-Ohm, 1/2 Watt)
IC1	367-0017	1	Integrated Circuit, Counter	R14,15	350-0538	2	Resistor (1,000-Ohm, 1/2 Watt)
IC2	367-0016	1	Integrated Circuit, Timing	R19	350-0380	1	Resistor (510-Ohm, 1/2 Watt)
Q1	382-0038	1	Transistor, Power	R20	350-0387	1	Resistor (1,000-Ohm, 1/2 Watt)
Q2,3,4	362-0011	3	Transistor, Signal	C9	356-0051	1	Capacitor, Electrolytic (6.8 Mfd., 35 Volt)
					322-0175	4	Receptacle, Lamp